L-Università ta' Malta
Faculty for Social Wellbeing

The Prevalence of Loneliness in Malta:

A nationally representative study of the Maltese population

August 2019

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FOREWORD

Prof. Joseph Cacciottolo

Pro-Rector for Academic Affairs, University of Malta

We have probably all been familiar with loneliness at some time during our lives. It may have been during our schooling, or at the workplace, or during patches in our personal lives; then possibly related to discrete and unpleasant life-events. We may have also discerned loneliness in others, be they acquaintances or loved ones …or we may not have discerned it at all, when it was in fact present, as feelings of loneliness can be hidden or masked very well.

It is facile to assume that loneliness is relatively uncommon among convivial persons or within the more gregarious societies, and conversely more common among sombre persons and traditionally less demonstrative societies. Loneliness in fact transcends age-groups, socio-educational backgrounds and cultural milieux.

People who have plenty of friends and socialise extensively can still feel lonely and it is the quality rather than the quantity of relationships and networks that matter. As the cliché goes, one can feel lonely in a crowd, and indeed one can be in the midst of a large gathering and feel unconnected, unable to trust or even talk to anyone. Loneliness is often the result of unhappiness brought about by absences ...the absences caused by having nothing worthwhile to do, nothing to look forward to, and nothing to love. To quote Mother Theresa; the most terrible poverty is loneliness, and the feeling of being unloved.

The Faculty for Social Wellbeing at the University of Malta took it upon itself to address the problem of loneliness among the Maltese population, and the result of this considerable task is a population-based representative study of prevalence of this condition. It is a landmark study on several counts. The study breaks new ground in Malta-related sociological research and is characterised by relevance, scientific rigour and objective insights in what essentially are deeply personal feelings.

It is no surprise that the Faculty for Social Wellbeing assumed the initiative to undertake this important study. The Faculty is at the forefront of social concern, responsibility and meaningful involvement in Maltese society and over a few years has established itself as a force in its own right, for sensitisation and change at national level.

The authors of the study, Marilyn Clark, Andrew Azzopardi and Jamie Bonnici are all eminently qualified researchers with excellent track records in designing and delivering pertinent research work addressing specific niches of sociological importance within communities. The Prevalence of Loneliness in Malta is one such investigative study, such that underlines the importance of the topic of loneliness and its implications to individuals and to Maltese society at-large. From a purely scientific standpoint, the study is an exemplar of stand-alone applied research of great academic worth.

The publication resulting from the study naturally falls into two segments; the introduction and the product of the field work itself. The introduction is truly a comprehensive and major essay, and at that, it is an authoritative exposition of loneliness, its determinants and its effects. It is also a distillation of up-to-date research on loneliness and its ramifications. The results of the field work and their analysis represent a solid platform and rationale for effective action to mitigate this problem in the Maltese community.

The study on the prevalence of loneliness in Malta, sobering as it is, ends with clear recommendations and therefore hope for possible practical solutions. The conclusions and recommendations are themselves an excellent springboard for further studies, both tangential and targeted, into the cause and effect of loneliness.

I have no doubt in my mind that the Faculty for Social Wellbeing is remarkably placed and able, to extend and add practical impact of this community-based study of loneliness in Malta into other avenues, both those of practical application as well as those of scholarship.

MESSAGE FROM THE AUTHORS

Humans are social beings who need to feel a certain sense of connection to those around them. The present study is testament to how important this sense of connection is for people's wellbeing. With research in other countries indicating that loneliness is on the increase (Beach & Bamford, 2014), and given the dearth of evidence on the existence of loneliness in Malta, the Faculty for Social Wellbeing felt obliged to assess and address the situation.

The Faculty for Social Wellbeing is at the forefront of identifying trends on the Maltese Islands that potentially affect both personal and social wellbeing. Prior to the initial stages of this study, the Faculty organised a conference in November 2018 with the theme 'Loneliness; Belonging and Community', which received considerable interest from various scholars and professionals alike. The Faculty also collaborated with Caritas Malta to produce a documentary entitled 'Il-Ġerħa tas-Solitudni: Il-mixja lejn soluzzjonijiet', which translates to 'The Wound of Loneliness: The journey towards finding solutions'. The response to both initiatives served as further confirmation that the phenomenon of loneliness deserves greater attention, in particular with reference to how it is experienced by the Maltese population. The authors are keen to develop an evidence base on this issue that will inform policy and practice in coming years.

In developing the questions that would accompany the standardised loneliness tool in this study's survey, the authors attempted to include as many relevant socio-demographic variables as possible. Likewise, attempts were made to include younger persons as well as adults amongst the sample. Although it may be desired to ensure the representation of as many groups of people as possible, methodological constraints limit the possibility to accomplish this with a single survey.

Whilst the results of this study – such as the finding that 43.4% of Maltese people experience some form of loneliness - are sobering, they also serve to provide data which can steer the direction of future attempts to improve people's social wellbeing. These, and other findings from the present study, give us an indication of the state of communities within our society and are a core indicator on the state of people's wellbeing on the Maltese islands.

EXECUTIVE SUMMARY

Background

The phenomenon of loneliness has been described as an epidemic in modern societies, given its detrimental effects on psychological and physical health. Evidence also indicates that rates of loneliness are increasing, and that the phenomenon is closely linked to a number of structural variables.

Although the experience of loneliness is a natural part of the human condition, studies show that prolonged or severe loneliness can have negative outcomes for those experiencing it. Whilst a dearth of empirical evidence exists regarding the prevalence of loneliness in Malta, there is an indication that loneliness is on the increase – such as the rising rates of calls to the national support line by persons suffering from loneliness, as well as the results of a study conducted by Caritas Malta showing that half of the elderly residents in a rural town of Dingli are lonely.

Project Purpose and Design

This study had the following objectives:

- To assess the prevalence of loneliness amongst the Maltese population,
- To explore any existing relationships between loneliness and particular socio-demographic and structural variables, and
- To contribute to the existing body of empirical research on the topic of loneliness.

These objectives were attained through the use of a Computer Assisted Telephone Interviewing (CATI) procedure. The questionnaire used included a standardised loneliness scale, the De Jong Gierveld Loneliness Scale, in addition to several socio-demographic questions. The questionnaire was made available in either English or Maltese and data collection was carried out during the month of March 2019.

The Sample

This study surveyed a representative stratified random sample of all persons living in private households in the Maltese Islands, aged 11 years and older. The sample was stratified to ensure adequate representation based on gender, age group, and district.

Results

The results of this study show that a total of 43.3% of individuals residing in the Maltese Islands experience some degree of loneliness. Of these, 41.3% are moderately lonely, 1.7% are severely lonely, and 0.5% are very severely lonely.

A number of socio-demographic variables were significantly associated with loneliness amongst the Maltese population. These are:

- Age group
- Level of education
- Labour status
- Household composition
- Mortgage status
- Perception of household income
- Subjective physical health
- Subjective coping ability
- Subjective wellbeing
- Presence of a disability

These significant associations reveal the factors which increase individuals' likelihood of experiencing loneliness. A person is more likely to be lonely if they: form part of an older age group; have limited educational attainment; are unemployed, retired, or otherwise not in employment; are widowed, separated, divorced, or married; live alone; have not paid off the mortgage on their dwelling; perceive their household income to be low; rate their physical health as 'bad'; have a poor self-rated coping ability and low subjective wellbeing; and are disabled.

Likewise, a person's risk of loneliness is reduced if they: form part of a younger age group; are highly educated; are in employment; are of a single marital status; live with their parent(s) or guardian(s), have paid off the mortgage on their dwelling; perceive their household income to be adequate or high; have good or very good self-rated physical health; rate their coping ability as good or very good; have a positive self-rated subjective wellbeing; and are not disabled.

Recommendations

The above findings provide the basis for a number of recommendations for research, practice and policy. Future research to periodically monitor the prevalence of loneliness amongst the Maltese population, as well as to explore the significantly associated demographic variables in greater depth, would be warranted. Policy recommendations for national and local Government include the establishment of a national loneliness strategy, addressing the rising cost of living, as well as devising initiatives to foster an improved sense of community amongst the population. Practical recommendations are also provided, including the provision of evidence-based interventions and of loneliness-specific training for professionals working with the general population.

CHAPTER 1
INTRODUCTION AND A REVIEW OF THE LITERATURE

1.1 Preamble

> "The I in illness is isolation, and the crucial letters in wellness are we"
>
> Guarneri, M. 2006, pp. 106–106.

Modern societies have experienced significant demographic changes over recent decades, with more people living alone, increased financial pressure leading people to work longer hours, high divorce rates, an ageing population, and couples having fewer children (Griffin, 2010). Many scholars note the potential influence of technology on our social relations, such as Dr Natalie Kenely of the Faculty for Social Wellbeing at the University of Malta who stated that "modern life, unfortunately, is making us more and more solitary because, although on a virtual level the world has shrunk, on a physical level… we're further apart from each other" (cited in 'Il-Ġerħa tas-Solitudni: Il-mixja lejn soluzzjonijiet', 2018). These changes are cited among the reasons for rising rates of loneliness, as the available evidence indicates that loneliness is increasing among individuals in contemporary societies and that it may be associated with particular structural variables (Griffin, 2010; Baker, 2012; Franklin & Tranter, 2008).

The experience of loneliness is far from a new phenomenon; the earliest known reference was made in approximately 1785 by a Swiss philosophical writer and physicist, Johann Georg Zimmermann, who wrote a paper which translates into "About Loneliness". Scientific research into the topic of loneliness was first published in 1938, where it was deemed to result from negative experiences in childhood (Zilboorg, 1938). Subsequently, in 1959, Reichman set out to define loneliness and came to the conclusion that psychological problems are caused by prolonged loneliness (De Jong Gierveld, Van Tilburg, & Dykstra, 2006; Perlman & Peplau, 1984). Perlman and Peplau, whose definition of loneliness is still predominant in today's literature, initiated the first empirical study on loneliness in 1981, where they conceptualised the phenomenon and illustrated the importance of cognitive processes in moderating one's experience of loneliness. They defined loneliness as an "unpleasant experience that occurs when a person's network of social relations is deficient in some important way, either quantitatively or qualitatively" (Perlman & Peplau, 1981, p.31).

Given the complexity of the phenomenon, a number of definitions abound in the vast literature on the subject. For the purposes of this study, the working definition adopted will be that proposed by De Jong Gierveld, which emphasises how loneliness is the subjective state faced when one perceives a discrepancy between what one desires out of social relations and what one experiences in reality:

> Loneliness is a situation experienced by the individual as one where there is an unpleasant or inadmissible lack of (quality of) certain relationships. This includes situations in which the number of existing relationships is smaller than is considered desirable or admissible, as well as situations where the intimacy one wishes for has not been realized. Thus loneliness is seen to involve the manner in which the person perceives, experiences, and evaluates his or her isolation and lack of communication with other people. (De Jong Gierveld, 1998, pp. 73-74)

This definition stems primarily from a cognitive model rooted in the belief that people actively evaluate their lives. Thus, loneliness can be defined as an unpleasant emotional experience that occurs due to a person's subjective evaluation of the discrepancy between the desired and actual quality or quantity of their social relations (Perlman & Peplau, 1982). A person can experience loneliness in two ways - socially, where they are lacking opportunities for social relationships, or emotionally, where their emotional needs are not being met by existing close relationships (Weiss, 1973). Both forms of loneliness are known to be destructive, having a negative impact on individuals' subjective wellbeing, physical and mental health, amongst other consequences.

According to Karnick (2005), loneliness, or the feeling of being alone, is universally experienced and is intrinsically tied with the experience of being human. The transient experience of loneliness is considered to be a natural part of the human condition (Qualter et al., 2015) and it has been posited to serve as an evolutionary mechanism that encourages individuals to seek out social connections, which is necessary for society to function (Cacioppo, Grippo, London, Goossens, & Cacioppo, 2015). Yet, when loneliness is experienced with a high frequency and intensity, or for prolonged periods, it becomes problematic due to ill effects on physical and mental health (Cacioppo et al., 2015).

1.2 Research Agenda

While this phenomenon has been extensively examined worldwide, little empirical research exists on loneliness as it is experienced in the Maltese context. Although some available research explores loneliness amongst certain groups (eg. Friggieri, 2008 among University students; Zammit & Fiorini, 2015 among institutionalised older people in Malta; Bondin, 2017 among older widowed Maltese women and others), measuring the prevalence of loneliness among the general population has not yet been attempted. The Maltese context poses particular challenges for wellbeing. Located in the center of the Mediterranean Sea with an area of 316 square kilometres, the Maltese Islands are one of the smallest archipelagos in the world. Yet, they are also one of the most densely populated, with more than 475,700 people residing in either Malta, Gozo, or Comino (NSO, 2019). Maltese society exists as a duality where modern forms of behaviour seek to coexist with traditional values and lifestyles (Baldacchino, 2016).

This study aims to gain a preliminary understanding of the scale of loneliness amongst a representative sample of the general population in Malta aged 11+ years old up until the very old. Population surveys aim to obtain reliable information on the extent of loneliness among different groups in the population and the characteristics of lonely people in order to assess the situation, plan, and prioritise responses. The collection of reliable and valid data informs strategic planning and allows policy makers to monitor progress towards policy targets. Surveys of the general population can shed considerable light on changing patterns of loneliness, and it is anticipated that efforts will continue to monitor the situation in this regard and consequently continue to inform social policy in Malta.

1.3 Theoretical Framework

Loneliness is a complex multidimensional and predominantly subjective phenomenon that has been defined by scholars in a number of ways. The following review of the literature will address the current state of loneliness research knowledge.

Theories that have predominantly been used to understand loneliness can be divided into four main approaches, namely the interactionist approach, the cognitive approach, the psychodynamic approach, and the existential approach (Tzouvara, Papadopolous, & Randhawa, 2015). It must be noted that none of the predominant theories relating to loneliness take cultural and social influences into account (Tzouvara et al., 2015) and this continues to constitute a major

limitation in the conceptualisation of this issue. The present study adopts an interactionist as well as a cognitive approach to understand the experience of loneliness.

The interactionist approach is based upon attachment theory, which holds that loneliness is caused by an individual lacking both an adequate social network and an intimate figure (Singh & Kiran, 2013). Weiss, a leading proponent of this approach, argues that loneliness is comprised of social loneliness as well as emotional loneliness, which he considers as distinct from one another. A person experiences social loneliness due to their perceived lack of social relations - possibly as a result of becoming unemployed or excluded by other members of the community. Emotional loneliness, on the other hand, may be experienced by a person whose intimate relationships are insufficient to meet their emotional needs - this form of loneliness may come about following the dissolution of a marriage, losing a loved one, or not having close friends (Tzouvara et al., 2015).

The cognitive approach to theorising loneliness draws upon attribution theory, giving importance to an individual's personality and behaviour in shaping their perceived sense of loneliness. This approach thus acknowledges the mediating effect of one's cognitive appraisal, in line with the belief that loneliness occurs when an individual compares their desired social relationships with their actual social relationships and finds that a qualitative or quantitative discrepancy exists (Perlman & Peplau, 1982; De Jong Gierveld, 1998).

The psychodynamic approach to theorising loneliness maintains that loneliness occurs due to an individual's difficulties with attachment and the formation of healthy child-parent relationships in early childhood (Tzouvara et al., 2015). Researchers adhering to this theoretical approach view loneliness as a pathology which results from a person's problems with regards to the formation of social relationships (Donaldson & Watson, 1996). Critics of this approach argue that it does not take into account factors such as age, the experience of bereavement, or culture, which are important determinants of loneliness (Donaldson & Watson, 1996).
An existentialist view of loneliness is based on the notion that our inherent separation as human beings forms the basis of experiencing loneliness (Tillich, 1952; Moustakas, 1972). This approach constructs a dichotomy of 'true loneliness' and 'anxiety loneliness', where the former occurs due to the realisation that we go through life alone, and the latter occurring when individuals try to avoid the reality of their lonely existence (Perlman & Peplau, 1982). The existentialist view, however, fails to distinguish between the objective and subjective nature of loneliness (Donaldson & Watson, 1996). It also does not consider that certain individuals may be alone without experiencing loneliness (Tzouvara et al., 2015).

The authors of this study subscribe to both the theoretical contributions of the interactionist and cognitive approaches, with particular attention to the cognizance of one's discrepancy between actual and desired social connections, and also to the importance of both social and emotional relational needs.

1.4 Conceptualising Loneliness

1.4.1 Concepts related to loneliness.

The concept of loneliness is closely related to other, distinct, concepts of social isolation, aloneness, and solitude. An individual is considered to be socially isolated when they do not have many meaningful social ties (De Jong Gierveld et al., 2006); In this way, social isolation is a more objective construct than that of loneliness, which does not take a person's subjective perception of their experience into account (Swader, 2018). Social isolation has been shown to be a predictor of loneliness (DiTommaso, Brannen, & Burgess, 2005; Lykes & Kemmelmeier, 2014), however, not all individuals who are socially isolated will necessarily experience loneliness (De Jong Gierveld et al., 2006). In the Faculty for Social Wellbeing's documentary on loneliness, the director of Caritas Malta, Mr Anthony Gatt, indicated the impact of social isolation with his comment that:

> Loneliness is a great source of human suffering. In fact, when one considers which is the worst punishment that a person can be given, we find that the worst punishment is what we call solitary confinement. It is when one is completely cut off, when one is in prison, in a room on their own away from the others. ('Il-Ġerħa tas-Solitudni: Il-mixja lejn soluzzjonijiet', 2018)

Solitude is another related concept, which tends to have more positive connotations than loneliness or social isolation (Bekhet, Zauszniewski, & Nakhla, 2008). Authors have instead argued that solitude is important for self-fulfilment and spiritual reflection (Ishmuhametov, 2006), by providing a calming and freeing experience (Bekhet et al., 2008; Killeen, 1998). Thus, the primary difference between loneliness and solitude is that loneliness is a result of a negative emotional evaluation of one's current state, whilst solitude occurs when one's state is evaluated as a positive emotional experience (Tzouvara et al., 2015). However, it must be noted that some languages, such as Maltese, do not have a distinct word for loneliness, with the most closely related Maltese term being 'solitudni', which translates to 'solitude'.

1.5 Measuring Loneliness

1.5.1 Global and multidimensional approaches.

Attempts at measuring loneliness have taken the form of either a global or multidimensional approach (Shaver & Brennan, 1991). The global, or unidimensional, approach adopts the assumption that loneliness can be measured using a single scale, since this approach views loneliness as taking on the same form, regardless of the situation. The UCLA Loneliness Scale (Russell, Peplau, & Cutrona, 1980) is based on this global approach. On the other hand, the multidimensional approach assumes loneliness to take on more than one form. The loneliness scale devised by De Jong Gierveld (De Jong Gierveld & Kamphuis, 1985) and utilised for this research, adopts this approach, through its measurement of loneliness as it is experienced both socially and emotionally. In this way, loneliness is considered to be emotional when an individual's relationships are lacking in quality, whereas social loneliness is characterised by a limited quantity of social connections.

1.5.2 Research instruments.

The inherently subjective nature of loneliness means that it is a difficult concept to measure in research studies. Researchers assessing the prevalence of loneliness have predominantly assessed the phenomenon through one of two methods: through the use of a single questionnaire item that requires participants to rate their level of loneliness on a Likert scale ('How often do you feel lonely?'), or through standardised tools designed to measure the experience of loneliness. Of the latter, the De Jong Gierveld Loneliness scale (De Jong Gierveld & Kamphuis, 1985) and the UCLA Loneliness Scale (Russell et al., 1980) have proved the most popular.

The possible responses for single-item questions vary across studies, with researchers adopting different numbers of response options on a Likert scale – for instance, some studies allow a person to state whether they are lonely 'never', 'some of the time', or 'almost always', whereas others provide more response options. Whilst this makes precise comparison difficult, it still allows for an understanding of the overall prevalence rates.

Prevalence rates for loneliness studies typically group certain responses to provide a figure for the percentage of individuals who report feeling lonely 'sometimes' or 'often', in the case of self-report scales. For standardised tools such as the De Jong Gierveld or UCLA Loneliness Scales, rates of people who are lonely are based on total scores that indicate a person is lonely – either moderately or severely.

1.6 Prevalence of Loneliness in the Lifespan

Research on loneliness over the life span shows that prevalence rates typically follow a nonlinear trajectory, with variation across countries. In the majority of Western nations, this trajectory resembles a shallow "U"-shaped curve, with the highest rates in late adolescence, gradually decreasing during middle adulthood and then increasing into late adulthood (Luhmann & Hawkley, 2016; Hawkley & Cacioppo, 2010; Yang & Victor, 2011). In contrast, research from Australia has found that the prevalence of loneliness across ages forms a curve resembling a dome, with rates peaking among adults aged 25-45 and gradually decreasing for those above the age of 80 (Franklin & Tranter, 2008).

Studies assessing the prevalence of loneliness have predominantly focussed on particular populations, with little attention being given to examining loneliness across all age groups (Victor & Yang, 2012). The majority of existing research has taken the approach of examining the prevalence of loneliness among specific age categories, such as the young or the old (Patterson & Veenstra, 2010; Rokach & Neto, 2000; Victor, Scrambler, Bond, & Bowling, 2000). Moreover, prevalence studies which include all ages are most often grouped into age ranges that are too broad to establish clear trends or make comparisons with other research (Victor & Yang, 2012).

Nonetheless, a small number of studies have examined the prevalence of loneliness in the general population. Yang and Victor (2011) attempted to compare rates of loneliness among 25 European countries using data from the European Social Survey. The results of their analysis show that Eastern European countries have the highest rates of frequent loneliness for all age groups, in particular for people in Ukraine where over 10% of the younger population is lonely and more than 30% of the 60+ population experience loneliness. In contrast, Northern European countries are considerably less lonely with less than 10% of populations being frequently lonely up until the age of 70. Central Europeans show much lower rates of frequent loneliness than Eastern Europeans, yet the rates are slightly higher than Northern Europeans, particularly among the 60+ ages.

A nationally representative study assessed the prevalence of loneliness among Danish adults aged 16+ using a Three-Item Loneliness scale based on the UCLA loneliness scale. The results show that 21% of people are lonely, with 16.4% moderately lonely and 4.6% severely lonely (Lasgaard, Friis, & Shevlin, 2016). For the American population, Hyland and colleagues (2018) used a 6-item version of the De Jong Gierveld Loneliness Scale among a nationally

representative sample of adults aged 18-70. They found that 17.1% of people were classified as lonely, with 26.6% scoring high on 'emotional loneliness', in contrast to 12.4% who score highly on both 'social' and 'emotional' loneliness, and 8.2% being predominantly 'socially' lonely.

Studies assessing loneliness in childhood show that, whilst the need to belong to a peer group is not as pronounced as in adolescence (Parkhurst & Hopmeyer, 1999), children in kindergarten may experience loneliness due to extreme exclusion by their peers (Kochenderfer-Ladd & Wardrop, 2001). Prevalence rates of loneliness amongst children aged 7-12 years of age show that fewer than 20% experience loneliness "sometimes" or "often" (Bartels, Cacioppo, Hudziak, & Boomsma, 2008). The reasons cited by children for their loneliness include problems with family relations, school-related issues, and bullying (Hutchison & Woods, 2010).

Given that a number of existing studies assessing loneliness amongst different age groups have only reported on discrete age groupings, this means that it is difficult to differentiate between the prevalence of loneliness amongst adolescents and young adults. For instance, the 2009 New Zealand Quality of Life survey provides information about loneliness for those aged between 15-24 years old, along with other age groups. Whilst this is problematic for understanding how loneliness is experienced differently amongst adolescents compared to young adults, the data are nonetheless useful in allowing an understanding of how loneliness varies across the life span.

Adolescence is a time where critical challenges occur with regards to one's social and personal development (Laursen & Hartl, 2013). Two such challenges faced by adolescents are the development of one's self-concept, and the establishing of intimate social relationships (Sippola & Bukowski, 1999). The dilemma lies in the fact that these two challenges are essentially opposed to one another, with the desire to form intimate relationships being in conflict with the need to separate oneself from others, thereby creating a high possibility of becoming lonely (Sippola & Bukowski, 1999).

Whilst a certain degree of loneliness is thus considered to be normative during the adolescent period, high or persistent levels of loneliness can nonetheless be problematic. Studies show that adolescents who are unable to resolve their experiences of loneliness prior to moving out of adolescence face a higher risk of developing adverse health outcomes, including depression, poor self-reported physical health, and increased alcohol consumption (McWhirter, Besett-Alesch, Horibata, & Gat, 2002; Qualter et al., 2013).

Many researchers have noted that evidence exists for loneliness peaking in early adolescence (Heinrich & Gullone, 2006; Van Roekel, Scholte, Verhagen, Goossens, & Engels, 2010). Indeed, Hawkley and Cacioppo (2010) found that nearly 80% of adolescents report constantly feeling lonely. Other studies have reported similar results of between 66-79% of adolescents reporting feeling lonely some of the time, and 15-30% of these experiencing loneliness that is painful and persistent (Brennan, 1982; Heinrich & Gullone, 2006). Similarly, Biolcati and Cani (2015) measured loneliness using the UCLA Loneliness Scale among young people aged 14-22 in Italy and found that 26.8% were lonely. In the Faculty for Social Wellbeing's documentary on loneliness, a young Maltese woman shared her experience of loneliness throughout adolescence:

> Between Year 6 and Form 1, I think it was at that time, when you're growing up and starting to understand better things about life and that sort of thing, that's when I started feeling lonely. But then I felt most lonely, I think, when was thirteen ... fourteen I think ... at that age. ('Il-Ġerħa tas-Solitudni: Il-mixja lejn soluzzjonijiet', 2018)

Furthermore, young people who experience sustained loneliness at high and moderate rates are more likely to suffer from depressive symptoms over time, when compared to their less lonely counterparts (Ladd & Ettekal, 2013). This is exemplified by a quote from the Faculty for Social Wellbeing's documentary, where another young Maltese woman described her experience of loneliness in conjunction with depression:

> It is a phenomenon where, even if for example you are surrounded by people, you are on your own because no one can understand you, no one can enter your mind and understand what you are feeling, because it's such a strong feeling, and it's this black thing that is surrounding you but you feel isolated, it is like a personal ghetto away from everyone and no one can reach you…. I have passed through a time when a specific event in my life … was so significant that it threw me into a depression for a long time. And it was that depression that then made me feel the loneliness. ('Il-Ġerħa tas-Solitudni: Il-mixja lejn soluzzjonijiet', 2018)

Following adolescence, loneliness tends to decrease into young adulthood, with different studies reporting various rates and age groupings. Using data from the Australian Survey of Social Attitudes, Franklin and Tranter (2008) found that 30% of individuals aged between 18 and 24 years reported feeling lonely in the previous week. Prevalence rates of loneliness in middle adulthood have been reported as the lowest of all age groups in several studies, such as Flood's (2005) estimates that 13% of those aged 35-54 experience loneliness. Another study used data about the United Kingdom from the European Social Survey to reveal that

only 5% of the 25-44 age group experienced loneliness all or most of the time (Victor & Yang, 2012).

Researchers have noted that, apart from the under-25 age group, loneliness levels are highest among individuals aged 55 years and above (Victor & Yang, 2012). Substantial life changes that occur in later life, such as losing a loved one or experiencing limited mobility, can put people at increased risk of loneliness (Dykstra et al., 2005). Prevalence rates of loneliness among adults over the age of 80 years are reportedly between 40% and 50% (Dykstra et al., 2005; Victor, Scambler, Bowling, & Bond, 2000; Demakakos, Nunn, & Nazroo, 2006). In the Faculty for Social Wellbeing's documentary on loneliness, Prof. Charles Scerri from the Department of Pathology at the Faculty of Medicine and Surgery, highlighted that loneliness:

> … affects mostly people who very often are elderly, who have to spend a lot of time on their own for different reasons. Among these, we find physical illness, illness which in some way stops a person's mobility, you cannot interact with society in general. ('Il-Ġerħa tas-Solitudni: Il-mixja lejn soluzzjonijiet', 2018)

A 2008 study of loneliness deployed two nationally representative surveys of the 60+ age group in the United Kingdom and the Netherlands who were living in urban neighbourhoods. Both surveys used the 11-item De Jong Gierveld Loneliness Scale and found that 13% of people aged 60+ in the UK were severely lonely, whilst only four per cent of the same age group in the Netherlands were lonely. The mean loneliness scores of participants in the UK also showed considerable variation between different neighbourhoods (Scharf & De Jong Gierveld, 2008).

1.7 Risk Factors of Loneliness

A large corpus of data exists for the various sociodemographic determinants and risk factors of loneliness. However, the vast majority of prevalence studies have focused on late adulthood (Beutel et al., 2017). The following literature will nonetheless discuss the main factors which have demonstrated links with loneliness.

1.7.1 Socio-demographic variables.

There is inconsistent empirical evidence with regards to the existence and/or nature of gender differences in the experience of loneliness (Pinquart & Sorensen, 2001; Cramer & Neyedley, 1998). Whilst some studies have reported that males are lonelier than females (e.g. Koenig, Isaacs, & Schwartz, 1994; Page, 1990), others have found that no significant difference exists between the genders (e.g. Archibald, Bartholomew, & Marx, 1995; Brage, Meredith, & Woodward, 1993). Researchers have noted that, regardless of age, females have a slightly higher likelihood of reporting, but not necessarily experiencing, loneliness than do males (Beutel et al., 2017; Victor & Yang, 2012; Borys & Perlman, 1985). This was initially observed when observing results from studies which measured loneliness with a self-report item, compared with those using indirect measures of loneliness such as the UCLA and De Jong Loneliness scales. Prevalence rates for males were higher when the word 'loneliness' was not explicitly used, whereas males were less lonely than females when the word 'loneliness' was used (Borys & Perlman, 1985).

Pinquart and Sorensen (2001) conducted a meta-analysis of loneliness in older adults and reported higher rates of loneliness for women compared to men, however this effect was only significant for married persons and not significant for unmarried persons (e.g. widowed or single persons). Few studies have examined gender differences in loneliness across the lifespan, with the majority focussing on particular age groups such as adolescents and the elderly populations. According to a meta-analysis by Maes and colleagues (2016), males experience slightly more loneliness than females amongst University students, however the effect size is small. One study of adults of all ages in the United Kingdom found that females of all age groups reported greater rates of loneliness; The only notable gender difference in loneliness across the life-span was among individuals aged between 45-54 years, where more males reported feeling 'sometimes lonely' on a self-reported loneliness item (Victor & Yang, 2012). The researchers suggest that this finding may indicate that gender differences occur as a result of different timings of certain experiences, such as bereavement.

Gender differences in self-reported loneliness have been hypothesised to occur due to an unwillingness by men to report that they are lonely. However, the similar rates of those experiencing loneliness 'sometimes' reported by those in the same age group suggests that male participants' reluctance to admit that they experience loneliness may only be partially true (Victor & Yang, 2012; Cramer & Neyedley, 1998). An interesting gender difference exists with regards to being single or unmarried: results from Pinquart (2003) show that unmarried males experience higher rates of loneliness than do their unmarried female counterparts. Similarly, widowers were found to be lonelier than widows and this finding was significant

after controlling for factors such as contact levels with siblings, children, and friends.

Stokes and Levin (1986) used measures of social network structure and of perceived social support to examine whether loneliness predictions were influenced by gender differences. They demonstrated that characteristics of one's social network, with density being particularly important, were better at predicting loneliness amongst males than females. Their results also suggest that there may be gender differences in how individuals evaluate their experience of loneliness, with men possibly focussing more of the quantity of their social network and women giving priority to the quality of relationships.

Marital status has consistently been proven to predict loneliness amongst adults, with married individuals experiencing lower rates of loneliness (Beutel et al., 2017; Diener, Gohm, Suh, & Oishi, 2000). A study of women aged 50 and above in America revealed that almost double the number of unmarried women reported feeling lonely very often, when compared to their married counterparts (Essex & Nam, 1987). Other research has found marital status to be the strongest out of four other predictors in determining loneliness (Page & Cole, 1991). However, research investigating individual variations of loneliness has found that the quality of a marriage is more important than whether or not one is married (Whisman & Bruce, 1999; Hawkley et al., 2008).

Research suggests that the presence of a chronic limiting illness or disability puts individuals at increased risk of experiencing loneliness, due to several factors such as having limited opportunities for social activities (Heckhausen, Wrosch, & Schulz, 2010; Hopps, Pepin, Arseneau, Frechette, & Begin, 2001). Individuals with an intellectual or physical disability have been found to be at risk of loneliness because of negative societal expectations and not having independence in their social lives (Hopps, Pepin, Arseneau, Frechette, & Begin, 2001; Gilmore & Cuskelly, 2014). Research also suggests that loneliness in persons with a physical disability is qualitatively different from that of the general population (Rokach, Lechcier-Kimel, & Safarov, 2006). Loneliness has also been shown to negatively affect perceptions of illness in individuals with a chronic disease (Özkan Tuncay, Fertelli, & Mollaoğlu, 2018).

A clear link has been demonstrated between a person's level of education and loneliness, with one study finding that only 3% of those with a tertiary education report severe loneliness - compared to 20% of those who had only obtained a primary level of education (Victor & Yang, 2012). Further research is needed to ascertain the mechanisms by which education acts as a protective factor against loneliness (Victor & Yang, 2012), however, researchers have offered two possible explanations for education's role in loneliness. Hensley et al. (2012) propose that

education functions through enhanced feelings of competence, which have been found to mediate the experience of loneliness. Others have pointed to the fact that education provides for more social opportunities, which could in turn reduce one's chances of experiencing loneliness (Hawkley et al., 2008).

Higher loneliness rates have been reported for the poor (Rubenstein, Shaver, & Peplau, 1979), as well as for individuals who are unemployed (Creed & Reynolds, 2001). Marginalised groups, including minority ethnic groups and persons over the age of 75, have also been found to be at greater risk of loneliness (Scharf, Phillipson, & Smith, 2014). One of the few studies exploring the link between loneliness and poverty among younger age groups reported that lonely adolescents' perceived poverty increased their chances of developing mental health issues, particularly for females (Shevlin, Murphy, Mallett, Stringer, & Murphy, 2013).

1.7.2 Psychosocial correlates.

Social relationships are a crucial element with regards to rates of loneliness. Individuals who actively participate in social events, such as voluntary or community activities or religious attendance, tend to experience lower rates of loneliness (Van Tilburg, De Jong Gierveld, Lecchini, & Marsiglia, 1998; Rote, Hill, & Ellison, 2013). Having a confiding relationship is also important for determining loneliness, with research showing that single individuals and adults without children can alleviate their emotional loneliness by having a best friend (Dykstra, 1993; Pinquart, 2003). Data reported in the Times of Malta in October 2018 revealed that a third of the calls received by the Maltese national support line in 2017 were due to people being lonely and not having anyone to talk to, with calls due to loneliness surpassing those related to drug or alcohol abuse problems (Caruana, 2018). These figures also indicate that loneliness rates have increased amongst Maltese people, given that data from the support line in 2016 showed that one out of ten calls were due to loneliness (Martin, 2016).

Moreover, living alone has been found to be a major risk factor for experiencing loneliness (Beutel et al., 2017). Whilst 2017 figures from Eurostat reveal that the Maltese population is made up of far fewer single individuals living alone than in other European Union countries (20.2% compared to an average of 33.1%), these figures have been on the rise in recent years (Caruana, 2017). Moreover, a study of individuals residing in the Maltese rural village of Dingli discovered that half of the elderly persons interviewed were lonely and living alone (Martin, 2016). The effect of living alone on loneliness also presents different patterns depending on age and gender. Beutel et al. (2017) found that middle-aged males and younger females who live without a partner are more likely to suffer from loneliness than other age or gender groups.

In addition to individual-level factors, the likelihood of being lonely may also be influenced by contextual factors, such as sociocultural and structural factors (De Jong Gierveld et al., 2006), although less research has been conducted in this area. For instance, data indicate that social inequality can cause loneliness, amongst other factors such as social exclusion and a sense of distrust of others (Kawachi, Kennedy, Lochner, & Prothrow-Stith, 1997; Ross, Mirowsky, & Pribesh, 2001). In a study of how the residential environment influences feelings of loneliness, residents from a Glasgow town who rated their neighbourhood as of a lower quality also reported more loneliness than residents who rated their neighbourhoods more positively (Kearns, Whitley, Tannahill, & Ellaway, 2015). In the Faculty for Social Wellbeing's documentary, Mr Mark Caruana, a Maltese economist, pointed to the link between structural factors and loneliness by commenting that "an economy that is doing well can be used to address things like policies to reduce loneliness and to increase people's wellbeing, but on its own it does not have any direct effect" ('Il-Ġerħa tas-Solitudni: Il-mixja lejn soluzzjonijiet', 2018).

It has been postulated that demographic and structural changes in industrialised countries have influenced loneliness by their effects on individuals' perceptions of how fair their society is (O'Rand, 2001). This may occur due to the cognitive processes that govern social comparison, leading people to feel deprived and disadvantaged (Wilkinson, 1994), which in turn has been shown to lower levels of trust in neighbourhoods (Ross, et al., 2001). Finally, this sense of distrust may put people at higher risk of social isolation and loneliness (De Jong Gierveld et al., 2006). Kearns and colleagues (2015) further support this correlation with their findings that aspects of neighbourhoods in deprived areas, such as reduced trust and other aspects of the physical environment, are important in either reducing or protecting against loneliness. In Malta, recent demographic and structural changes were highlighted in the Faculty for Social Wellbeing documentary by Dr Andreana Dibben, who lectures in the Department of Social Policy and Social Work:

> At the moment, we have a project and also local research here in Malta that shows that we are losing public spaces, this is having an impact on what we call wellbeing – citizens' wellbeing, physical and psychological…. So, if in the past there was the street, the square where perhaps older people would stay on the pavement, the children would be playing outside, perhaps the parents would go out for a chat while watching their children play. Nowadays, these spaces very often have been eaten up by parked cars, passing traffic, building so that some spaces may no longer be available, and I think there is a link that we are not looking at enough. ('Il-Ġerħa tas-Solitudni: Il-mixja lejn soluzzjonijiet', 2018)

Societal patterning of social and economic resources can also have an effect on social integration by influencing people's mutual concern for their neighbours' wellbeing and the overall sense of community. Such contextual-level factors were shown to be linked with individuals' risk of loneliness (Thomése, Van Tilburg, & Knipscheer, 2003). Moreover, societal norms about the obligations of family members and the optimal size for one's social network may also influence people's relationship standards, thereby affecting one's perceived loneliness (De Jong Gierveld et al., 2006).

Despite the importance of contextual-level factors, relatively few studies have attempted to investigate cultural variations in the experience of loneliness (Rokach, 2001). An exception is Swader (2018), who looked into whether collectivism or individualism have an effect on loneliness. By analysing European Social Survey data from 21 countries, Swader demonstrated that societies that are individualistic may have lower prevalence rates of loneliness. He also found that one's personal orientation as a collectivist or individualist may moderate the effects of living alone or being socially isolated. Based on these findings, Swader recommends that living in an individualistic society with a high degree of social integration is crucial for reducing loneliness - both among collectivists and individualists.

1.8 Consequences of Loneliness

An expanding number of longitudinal research studies indicate that loneliness increases the risks of morbidity and mortality (Seeman, 2000; Caspi, Harrington, Moffitt, Milne, & Poulton, 2006; Thurston & Kubzansky, 2009; Shiovitz-Ezra & Ayalon, 2010). Whilst some research has not been consistent in determining the causality and directionality of associations with loneliness and indicators of health, a growing body of longitudinal research indicates that loneliness precedes the experience of detrimental health effects (see Musich et al., 2015). The consequences of loneliness may be grouped into its effects on: physical health and mortality; mental health and cognitive functioning; quality of life; and social consequences.

1.8.1 Physical health and mortality.

Poor physical health has been strongly linked to loneliness (Rokach, 2004; Steptoe et al., 2013; Holt-Lunstad, Smith, Baker, Harris, & Stephenson, 2015; Holwerda et al., 2016), regardless of whether health is measured in an objective or subjective manner (Wenger, Davies, Shahtahmasebi, & Scott, 1996; Havens & Hall, 2001). Valtorta et al. (2016) found that people with poor social relationships have a 32% increased incidence of stroke and a 29% increase in the incidence of coronary artery disease, demonstrating that poor social relations are equivalent in effect to job strain and similar factors. Loneliness has also been shown to lead to high

blood pressure (Hawkley, Thisted, Masi, & Cacioppo, 2010), difficulties sleeping (McHugh & Lawlor, 2013), and increased overall mortality rates (Luo, Hawkley, & Cacioppo, 2012; Taube, Kristensson, Sandberg, Midlöv, & Jakobsson, 2014). Cacioppo and Hawkley (2007) revealed that individuals experiencing persistent loneliness have increased levels of stress hormones, weaker immune systems and more cardiovascular problems, meaning that being lonely has the same detrimental health effects as being a smoker.

In addition, loneliness can affect physical health by making individuals less likely to exercise, eat healthily, take prescribed medication, visit their doctor, or take time to relax (Pérodeau & du-Fort, 2000; Mahon, Yarcheski, & Yarcheski, 2001). A nationally representative study of loneliness in the German general population also reported that lonely individuals tend to smoke more and over-use healthcare services, further demonstrating the link between poor physical health and loneliness (Beutel et al., 2017). Researchers have proposed three main pathways by which loneliness can affect health. These are: engaging in risky health behaviours such as being physically inactive or smoking, effects on the immune system and blood pressure, and through psychological factors such as limited coping skills or low self-esteem (Valtorta, Kanaan, Gilbody, Ronzi, & Hanratty, 2016).

1.8.2 Mental health and cognitive functioning.

Mental health difficulties, such as anxiety, depression, and suicide or suicidal ideation have also been linked to loneliness (Cacioppo & Patrick, 2008; Beutel et al., 2017). The data suggest that depression and loneliness share a reciprocal relationship, in which the two constructs are distinct but closely related (Cacioppo, Hughes, Waite, & Thisted, 2006). Lonely individuals are also more likely to have reduced positive emotions (Victor & Yang, 2012; Heinrich & Gullone, 2006) as well as lower life satisfaction and less resilience, in particular for males (Zebhauser et al., 2014).

Subjective wellbeing, which refers to the cognitive and emotional ways in which a person evaluates their life, has been shown to share a reciprocal relationship with loneliness (Vander-Weele, Hawkley, & Cacciopo, 2012). This association is further supported by evidence that social support has both indirect and direct effects on wellbeing, and can diminish loneliness (Gençöz, Özlale, & Lennon, 2004).

Loneliness can also lead to cognitive impairment and poses greater risks of developing dementia for older individuals (Amieva et al., 2010; Ellwardt, Aartsen, Deeg, & Steverink, 2013; Holwerda et al., 2014; Wilson et al., 2007).

1.8.3 Quality of life.

Another outcome of loneliness is its impact on quality of life (QoL). Whilst more research is needed on this topic, results indicate that loneliness reduces a person's QoL (Dahlberg & McKee, 2014; Golden et al., 2009; Lim & Kua, 2011; Taube et al., 2014; Van Beljouw et al., 2014). Studies have found that loneliness can be an influential mediator in the QoL of older adults with chronic illnesses (Musich, Wang, Hawkins, & Yeh, 2015) and people with visual impairment (Brunes, Hansen, & Heir, 2019). Loneliness is also an important predictor of QoL among caregivers and older persons in general (Ekwall, Sivberg, & Hallberg, 2005).

1.8.4 Social consequences.

Research has shown that loneliness has a negative impact on a person's social interactions. Arpin and Mohr (2018) demonstrated that a person who is lonely may derive less enjoyment from social interactions that are usually regarded as positive, such as sharing good news with friends or family. Such an effect has been postulated as possibly reducing the feeling of support and intimacy that might otherwise have been derived from the interaction, whilst leading to a cycle of loneliness involving fewer such interactions in the future.

Experiencing marital dissatisfaction or poor marital quality has also been linked to increased loneliness, as well as depression and early mortality (Whisman & Bruce, 1999), with adverse health outcomes being more pronounced for women (Eaker, Sullivan, Kelly-Hayes, D'Agostino Sr, & Benjamin, 2007).

1.9 Interventions Targeting Loneliness

As may be expected with a phenomenon which is still relatively new in the area of academic research, the growing body of scientific literature on loneliness has been preoccupied with understanding the related factors and theoretical contributions. Yet, Weiss (1982) was quick to caution researchers on the importance of considering practical implications of their work on loneliness. He stated that, given the disturbing quality of the topic, scholars should consider their responsibility to make efforts that can help those people suffering from loneliness. Loneliness interventions tend to have three broad aims, as described by Rook (1984): improving social integration, preventing loneliness from escalating into more serious problems, and preventing the initial occurrence of loneliness. During her interview in the Faculty for Social Wellbeing documentary, the head of the Department of Social Policy and Social Work at the University of Malta's Faculty for Social Wellbeing noted the importance of improving social integration in efforts to address loneliness:

> On a practical level I would really like to make a sort of proposal for initiatives that we can take to create a bridge between the generations and to create more inclusive communities, communities that are more open to others and people to each other and also a social policy that strengthens our community, encourages our involvement in society. (Kenely, cited in 'Il-Ġerħa tas-Solitudni: Il-mixja lejn soluzzjonijiet', 2018)

In their overview of existing systematic reviews of interventions that aim to alleviate loneliness, Victor et al. (2018) note that there is not a 'one size fits all' approach. Rather, most researchers suggest that programmes should be designed so that they are tailored to the individual's needs and circumstances in order to be more effective. Whilst their review did not find any indication of interventions having a harmful effect on those people who took part, it was indicated that interventions based on technology could worsen a sense of social isolation among individuals who lacked sufficient capabilities to use such technological systems.

Interventions that have been designed to tackle loneliness have taken various forms, with recent attempts making use of animal assisted therapy (AAT) – including robotic dogs (see review by Gilbey & Tani, 2015), social support interventions and befriending programmes (see Poscia et al., 2018; Siette, Cassidy, & Priebe, 2017; Hagan, Manktelow, Taylor, & Mallett, 2014), and physical exercise programmes (Shvedko et al., 2018). The majority of these interventions were conducted with older individuals and it is thus difficult to generalise findings to other age groups. Nonetheless, limited support was found for the effectiveness of such interventions in reducing loneliness. Some interventions, such as those involving technology and animals, did show promise; However, the evidence is limited by methodological issues such as studies being under-powered and lacking a theoretical basis (Victor et al., 2018).

Other studies have found that interventions which seek to address the maladaptive thought processes that might perpetuate loneliness, such as cognitive behavioural therapy, were more effective than interventions targeting social skills or increasing social contact (Masi, Chen, Hawkley, & Cacioppo, 2011). This confirms the cognitive element in an individual's experience of loneliness, as do other studies which found success from interventions aimed at retraining individuals' attention to social stimuli in their environment (Qualter et al., 2015).

Community-based interventions designed to alleviate loneliness among older adults have been deemed effective because they allow individuals to develop meaningful relationships and facilitate an improvement in social connections (Victor et al., 2018). A form of intervention that

relies on the benefits of the community is the practice of social prescribing, where individuals are encouraged to improve their access to peer interaction in the context of wider society, as opposed to offering such services in mental health facilities. In this way, social prescribing aims to develop or re-establish social connectedness, whilst ameliorating the negative aspects of issues such as loneliness or depressed mood (Davidson, Shahar, Lawless, Sells, & Tondora, 2006). One randomised controlled trial investigated the efficacy of a supported socialisation intervention which connected participants who had a mental health issue with a volunteer partner and provided a small stipend to spend on a weekly social or leisure activity. The authors found that such supported socialisation reduced social loneliness levels and depression whilst increasing functioning related to social recreation (Sheridan et al., 2015).

Examples of interventions in community settings include volunteering, befriending programmes, and involvement in neighbourhood projects. Neighbourhood projects in the United Kingdom have included 'Men in Sheds' and intergenerational projects, among others – and authors have reported significant improvements in loneliness scores as a result of such interventions (Leicester Ageing Together, 2017). Other promising interventions consist of projects such as 'Homeshare' and 'Shared Tables' (Macmillan, Ronca, Bidey, & Rembiszewski, 2018; Care Connect, 2017). 'Homeshare' projects identify people who require support or companionship in their households and connect them with other people who require affordable housing. The latter are provided with an affordable home in return for providing companionship and helping with minimal practical support needs of the homeowner. 'Shared Tables' consists of bringing together individuals who require companionship (due to living alone or being single) at local restaurants, with a volunteer hosting the event, which facilitates participants to develop meaningful relationships.

Furthermore, government initiatives have also recognised the value of community through the practice of social prescribing, also known as community referrals. Social prescribing enables general practitioners to refer patients experiencing loneliness to community workers and social operators. These workers are then able to provide tailored support to the patient, which could involve participating in community activities, engaging in voluntary work, or engaging with other community infrastructure services. An example of how a community's infrastructure services can contribute to alleviating loneliness is by postal service workers agreeing to check up on persons who are particularly isolated as they go about their delivery route (HM Government, 2018).

1.10 Conclusion

Theoretical perspectives and conceptualisations have been outlined in this chapter, along with the relevance of cognitive and interactionist definitions in understanding loneliness. Similar but related constructs to loneliness, such as social isolation and solitude, were mentioned, along with notes on the scientific measurement of loneliness. Prevalence rates for loneliness across the lifespan from various studies were presented, whilst considering the fact that existing research predominantly focuses on the younger or older age groups. The literature above has also illustrated the pervasiveness of loneliness among several biopsychosocial, as well as wider cultural, risk factors and consequences. Finally, this chapter summarised the interventions designed to address loneliness and their potential effectiveness.

CHAPTER 2
METHODOLOGY

2.1 Research Agenda and Research Questions

This research study is the first attempt to investigate the prevalence of loneliness amongst a random representative sample of the Maltese population, aged 11 years and above. The prevalence of loneliness was assessed according to the conceptualisation by Weiss (1973), which states that loneliness can be experienced on two levels – socially or emotionally – as well as the notion of loneliness as an unpleasant emotional experience that occurs due to a person's subjective evaluation of the discrepancy between the desired and actual quality or quantity of their social relations (Perlman & Peplau, 1982).

Drawing on a corpus of international research, this general population survey on loneliness consisted of the following aims:

1. To assess the prevalence of loneliness amongst the Maltese population,
2. To identify any existing relationships between loneliness and particular socio-demographic and structural variables, and
3. To make a contribution to the existing body of empirical research on the topic of loneliness.

2.2 Research Tool

2.2.1 Survey measure.

The present study used the De Jong Gierveld Loneliness Scale (De Jong Gierveld & Kamphuls, 1985) to assess the prevalence rates of loneliness amongst the general population. This scale contains eleven items, six of which measure emotional loneliness, and five which measure social loneliness. Emotional loneliness measures whether the respondent lacks intimate relationships, whilst social loneliness measures whether they are lacking in social embeddedness and integration (Weiss, 1973). Response options for all items are rated on a three-point Likert scale: 'yes', 'more or less', and 'no'. Responses are used to calculate a final score, with a higher final score indicating a greater degree of loneliness. The scores are classified as ranging between 0 (not lonely) to 11 (severely lonely), with a score of 2 being the cut-off point for determining loneliness (De Jong Gierveld & Van Tilburg, 1999).

The final score indicates the degree of loneliness according to the following categories:

- Not lonely (score of 0-2)
- Moderately lonely (score of 3-8)
- Severely lonely (score of 9 or 10)
- Very Severely lonely (score of 11)

Scores for social and emotional loneliness can also be obtained from responses to the corresponding questions on the scale. An advantage of this research tool is that questions do not specifically mention the term 'loneliness', instead relying on several questions that indirectly measure loneliness. This approach could thus reduce the likelihood of participants under-reporting their experience of loneliness, which may occur due to a fear of stigmatisation (De Jong Gierveld et al., 2006). Using a survey which does not directly refer to the term 'loneliness' also has the added benefit of being applicable in Maltese, despite the lack of an equivalent term in the Maltese language.

The final questionnaire comprised the 11-item De Jong Gierveld Loneliness Scale and twenty-one demographic questions. The demographic questions requested data related to participants' age, gender, nationality, place of birth (Malta, EU, Non-EU), residential locality, level of education, employment status, marital status, relationship status, living situation, income, sense of belonging to neighbourhood, self-rated health, subjective coping ability and wellbeing, tobacco use, presence of disability and whether such disability limits access to leisure and social activities or support services, and active citizenship. In designing the demographic questionnaire items, consideration was also given to the fact that minors would be participating in the survey. Such considerations took the form of omitting certain questions for participants under specified ages. Participants under the age of 16 were not asked about their current employment status (which was automatically classified as 'student') or about their marital status (which was automatically classified as 'single'). Furthermore, participants under the age of 18 were not asked about whether they were currently in a relationship, nor about whether the mortgage is paid on the dwelling in which they reside.

2.2.2 Psychometric properties of the instrument.

The De Jong Gierveld Loneliness Scale (De Jong Gierveld & Kamphuis, 1985) is the most commonly used measure for loneliness in Europe (Delgado, Litago, & González, 2014). The scale has been extensively validated for use with different populations, including adolescents (Grygiel, Humenny, & Rębisz, 2019) and the elderly (Penning, Liu, & Chou, 2014). It was initially developed in Dutch, on the basis of content analysis of 114 lonely people's

experiences with loneliness, and has subsequently been translated into several languages, including English, Danish, Italian, German, French, Russian, Bulgarian, Georgian, Japanese, Chinese, Polish (Grygiel, Humenny, Rebisz, Świtaj, & Sikorska, 2012), Turkish (Uysal-Bozkir, Fokkema, MacNeil-Vroomen, Van Tilburg, & De Rooij, 2017), and Spanish (Buz, Urchaga, & Polo, 2014). The scale has also found to be stable across cultures (Van Tilburg, Havens, & De Jong Gierveld, 2004).

The scale has been tested extensively and proven to be consistent and reliable with low measurement invariance (Penning et al., 2014; Masi, Chen, Hawkley, & Cacioppo, 2011; Maes, Klimstra, Van den Noortgate, & Goosens, 2015; Dykstra & De Jong Gierveld, 2004). Validity of the scale has been determined in previous studies by examining the construct validity, which refers to the extent to which the questions on the scale are measuring the underlying theoretical construct. Moreover, structural validity of the scale has been confirmed by studies which investigate whether the scale demonstrates a high correlation with constructs that are conceptually similar, such as quality of life and emotional wellbeing (Iecovich, 2013; Luanaigh & Lawlor, 2008; Uysal-Bozkir et al., 2017).

2.3 Sampling

2.3.1 Coverage and response.

The target population for this survey consisted of all persons aged 11 years and over living in private households in the Maltese Islands. This meant that a total of 428,967 persons were eligible to participate in the survey. Identification of eligible participants occurred through the latest population register which is maintained by the National Statistics Office (NSO). Tables 1 and 2 below illustrate the distribution of persons by gender and age group and the distribution of persons by gender and district.

Table 1. Distribution of population by gender and age group

Age Group	Gender					
	Male		Female		Total	
	No.	%	No.	%	No.	%
11-34	78,657	36.1	71,977	34.1	150,634	35.1
35-54	67,606	31.0	62,136	29.4	129,742	30.2
55+	71,710	32.9	76,881	36.4	148,591	34.6
Total	**217,973**	**100.0**	**210,994**	**100.0**	**428,967**	**100.0**

Table 2. Distribution of population by gender and district

District	Gender					
	Male		Female		Total	
	No.	%	No.	%	No.	%
Southern Harbour	36,498	16.7	36,266	17.2	72,764	17
Northern Harbour	70,739	32.5	67,887	32.2	138,626	32.3
Southern Eastern	32,844	15.1	30,440	14.4	63,284	14.8
Western	27,184	12.5	26,842	12.7	54,026	12.6
Northern	35,708	16.4	34,639	16.4	70,347	16.4
Gozo and Comino	15,000	6.9	14,920	7.1	29,920	7.0
Total	**217,973**	**100.0**	**210,994**	**100.0**	**428,967**	**100.0**

2.3.2 Sample.

This survey adopted a stratified random sampling process without replacement, which involves partitioning the population into sub-groups that are mutually exclusive. An independent simple sample is then selected from each sub-group, ensuring that the sample is uniformly distributed in relation to the pre-selected population characteristics. The sub-groups for this study were gender, age group, and district.

In order to ensure that the required number of participants were selected from each sub-group, quotas were also used throughout the data collection process. The use of quotas is beneficial when some of the sub-groups are smaller than others, since this ensures that an adequate number of individuals are included in the final sample. Moreover, the application of quotas does not introduce any significant bias since participants are selected in a random manner.

2.4 Ethical Considerations

The researchers of this study obtained ethical clearance from the Faculty Research Ethics Committee (FREC) within the Faculty for Social Wellbeing at the University of Malta. Institutional approval for gaining access to participants was also sought from the Office of the Commissioner for Children in Malta, given the planned involvement of participants who are minors. Potential participants were provided with details about the study, as well as their rights as a research participant and according to the General Data Protection Regulations (GDPR). Prior to obtaining assent from potential minor participants, informed consent was obtained from the respective parental guardian of the minor.

Due to the nature of the study, the possibility of opting out at the stage of assent (in the case of minors) and consent (in the case of adults and parental guardians) was chosen to prevent sampling bias and to ensure a representative sample was obtained. Participants were also provided with details for support services, should these be required as a result of completing the survey. Information was also given for participants to learn more about the research findings, upon completion of the study.

2.5 Pre-Testing Procedure

2.5.1 Translation of instrument into the Maltese language.

Explicit permission to translate and use the De Jong Gierveld Loneliness Scale was not required for this study, given that the authors of the research tool have provided permission to do so for the purposes of academic research (De Jong Gierveld & Van Tilburg, 1999). The scale was adapted to the Maltese language by an independent linguistic expert from the NSO creating a translated version, while another linguistic expert from the same office back-translated the scale from Maltese to English. Following this, the back-translated version was found to be conceptually identical to the original English version of the scale.

2.5.2 Adaptation of instrument to the adolescent population.

During the translation process, the decision was taken to include an additional filter question to the original scale. This additional question ("Do you have a really close friend?" Yes/no) was added prior to the original second question in the scale, "I miss having a really close friend" (yes/more or less/no) to ensure that the correct response was recorded for the original question when adolescent participants completed the survey, at the request of the Office of the Commissioner for Children in Malta.

Participants who provided a negative response to the additional question, to indicate that they do not have a really close friend, were subsequently asked the original second question on the scale. Participants who provided a positive response were automatically classified as responding negatively to the original second question, i.e. indicating that they do not miss having a really close friend. In this way, the additional filter question was not included in the final analysis of participants' total loneliness scores.

2.6 Survey Procedure - CATI

Data collection was aided by means of Computer Assisted Telephone Interview (CATI) between 20th and 27th March 2019. CATI involves contacting participants over the telephone whilst using a computer to enter their responses to the questionnaire items. An important aspect of CATI surveys is that each potential participant is randomly assigned to interviewers, which reduces interviewer bias to the bare minimum.

2.7 Quality Control

The present study employed a number of measures to ensure optimum quality of the obtained data. The CATI program contains in-built validation rules that are designed to limit any non-sampling errors from occurring. Such validation rules allow skip patterns to be executed exactly as intended, as long as responses fall within a specified range.

A hot-deck imputation method was also used to deal with missing data that occurs when participants do not respond to a particular question. This method involves filling in missing values with the most frequently occurring value of the respective category. Treating missing data in such a way allows for the creation of a complete dataset which can subsequently be analysed to its fullest extent.

2.8 Weighting of Results

Survey data were weighted to correct for any biases present in the final sample of participants, arising from different rates of responses observed in different categories. This served to align and gross-up sample estimates with the benchmark distribution in terms of gender, age group, and district.

2.9 Errors

The survey data were potentially subject to two possible sources of errors, known as sampling and non-sampling errors. Sampling errors are those which may arise due to probability. In this respect, the margin of error provides a quantifiable indication of the degree to which sampling error can occur in the survey's results, expressed as a percentage of the quantity to which it refers. Moreover, the margin of error was associated with a statistical confidence level of 95%. Whilst it is possible to estimate the margin of error from the sample obtained, comparisons with estimated figures in the population should nonetheless be considered with caution.

Precision estimates for a range of derived percentage rates (p), along with the corresponding (weighted) number of persons (N) for which the rates are computed, are illustrated in Table 3 below.

Table 3. Estimates of precision

Percentage rate (p)	Number of Persons (N)						
	34,139	115,895	217,973	347,356	396,302	404,253	428,967
1	2.2%	1.3%	0.9%	0.7%	0.6%	0.6%	0.6%
3	3.8%	2.2%	1.5%	1.2%	1.1%	1.1%	1.1%
6	5.3%	3.0%	2.1%	1.6%	1.5%	1.5%	1.5%
10	6.7%	3.8%	2.6%	2.1%	1.9%	1.9%	1.8%
20	9.0%	5.1%	3.5%	2.7%	2.6%	2.6%	2.5%
40	11.0%	6.2%	4.3%	3.4%	3.2%	3.1%	3.0%*
50	11.2%	6.3%	4.4%	3.4%	3.2%	3.2%	3.1%
60	11.0%	6.2%	4.3%	3.4%	3.2%	3.1%	3.0%
70	10.3%	5.8%	4.0%	3.1%	3.0%	2.9%	2.8%
80	9.0%	5.1%	3.5%	2.7%	2.6%	2.6%	2.5%
90	6.7%	3.8%	2.6%	2.1%	1.9%	1.9%	1.8%

For example, the percentage of persons who experience some degree of loneliness stood at 43.5%. This is calculated out of the total number of 428,967 eligible persons. In this case, if a precise calculation is carried out, the margin of error equals 3.0%*. From Table 3, this may be estimated using data for p=40. In this case, the margin of error equals 3.0%. Thus, if the estimated value is considered, the 95% confidence interval is the range 40.5% to 46.5%, i.e. 43.5% ± 3.0%.

It must be emphasised that figures based on a relative margin of error of 30 per cent or more, or which are calculated on a small number of reporting persons (for example 30 or less), must be treated with caution as they may not be statistically representative due to a large percentage of error assigned. These occurrences are shaded in Table 3.

Non-sampling errors consist of human errors not attributed to chance. A number of measures were taken during the data collection process in order to reduce the presence of any such errors. These measures included:

- Employing experienced interviewers under high-quality supervision to collect the data,
- Implementing a number of validations in the data entry program to reduce any errors due to data entry,
- Testing the CATI program prior to commencing data collection to identify any technical errors,
- Conducting interviews outside of traditional school- or office-hours to reach a wide range of participants and reduce the likelihood of non-response bias,
- Making use of the CATI program to allow a large number of interview attempts, in comparison to using alternative data collection methods. This increased the chances of reaching a sufficiently broad sample, and
- The CATI program allowing for instant recoding of responses to minimise possible human errors.

2.10 Data Analysis

The Statistical Package for Social Sciences, version 25 (SPSS 25.0) was used to analyse the data obtained in the present study. Analysis consisted of conducting Chi Square tests for the association between the loneliness scores and main demographic variables. This involves testing whether the frequencies of a particular categorical variable differ across levels of another categorical variable. In this way, it was possible to determine whether a statistically significant relationship exists between the two variables.

CHAPTER 3
RESULTS

3.1 Demographic Characteristics of the Sample

A total of 2,464 persons were contacted and invited to complete the survey. Of these, 1,009 participated, while another 1,341 persons were not reachable to participate. Unreachable cases consisted of 886 persons who were contacted at least once to no avail, and who were eventually not contacted again due to exhausted quotas, as well as persons with incorrect telephone numbers. This resulted in a net effective response rate of 89.8%. Table 4 shows the distribution of the gross sample by type of response:

Table 4. Distribution of effective gross sample by type of response

Description	No.	%	No. (Effective)	% (Effective)
i) Good responses	1,009	40.9	1,009	89.8
ii) Refusals	101	4.1	101	9.0
iv) Other (No replies, etc.)	13	0.5	13	1.2
v) Unreachable (Wrong telephone numbers etc.)	1,341	54.4	-	-
Total	**2,464**	**100.0**	**1,123**	**100.0**

Table 5 illustrates the distribution of the net sample by gender and age group and Table 6 illustrates the distribution of the net sample by gender and district.

Table 5. Distribution of sample by gender and age group

Age Group	Gender					
	Male		Female		Total	
	No.	%	No.	%	No.	%
11-34	167	33.2	169	33.4	336	33.3
35-54	166	33.0	167	33.0	333	33.0
55+	170	33.8	170	33.6	340	33.7
Total	**503**	**100.0**	**506**	**100.0**	**1,009**	**100.0**

Table 6. Distribution of sample by gender and district

District	Gender					
	Male		Female		Total	
	No.	%	No.	%	No.	%
Southern Harbour	89	17.7	80	15.8	169	16.7
Northern Harbour	83	16.5	83	16.4	166	16.5
Southern Eastern	82	16.3	93	18.4	175	17.3
Western	81	16.1	85	16.8	166	16.5
Northern	84	16.7	88	17.4	172	17.0
Gozo and Comino	84	16.7	77	15.2	161	16.0
Total	**503**	**100.0**	**506**	**100.0**	**1,009**	**100.0**

The districts in Table 6 refer to the Local Administrative Units (LAUs) created by Eurostat, and the towns and localities making up each district is specified in Table 7 below.

Table 7. Towns and localities by district

District	Towns and localities
Southern Harbour	Cospicua; Fgura; Floriana; Ħal Luqa; Ħaż-Żabbar; Kalkara; Marsa; Paola; Santa Luċija; Senglea; Ħal Tarxien; Valletta; Vittoriosa; Xgħajra
Northern Harbour	Birkirkara; Gżira; Ħal Qormi; Ħamrun; Msida; Pembroke; San Ġwann; Santa Venera; St Julian's; Swieqi; Ta' Xbiex; Tal-Pietà; Tas-Sliema
Southern Eastern	Birżebbuġa; Gudja; Ħal Għaxaq; Ħal Kirkop; Ħal Safi; Marsaskala; Marsaxlokk; Mqabba; Qrendi; Żejtun; Żurrieq
Western	Ħad-Dingli; Ħal Balzan; Ħal Lija; Ħ'Attard; Ħaż-Żebbuġ; Iklin; Mdina; Mtarfa; Rabat; Siġġiewi
Northern	Ħal Għargħur; Mellieħa; Mġarr; Mosta; Naxxar; St Paul's Bay
Gozo and Comino	Fontana; Għajnsielem; Għarb; Għasri; Munxar; Nadur; Qala; San Lawrenz; Ta' Kerċem; Ta' Sannat; Victoria; Xagħra; Xewkija; Żebbuġ

The vast majority of participants were born in Malta (96%), with the remainder born in a non-EU country (1%) or an EU country (1%) (Table 8).

Table 8. Country of birth

Country of birth	Frequency	Percent
Malta	967	96%
Abroad - EU country	8	1%
Abroad - Non-EU country	13	1%

The largest percentage of participants had completed a secondary level of education (36.5%), followed by close to a quarter who had completed a primary or lower level of education (24.5%). 22.3% were educated at a tertiary level of education, with the lowest proportion completing a post-secondary non-tertiary level of education (16.7%) (Table 9).

Table 9. Distribution of sample by highest level of education

Highest level of education	Frequency	Percent
Primary or lower	247	24.5%
Secondary	368	36.5%
Post-secondary non-tertiary	169	16.7%
Tertiary	225	22.3%

Very few of the participants were unemployed (1%), reflective of the low unemployment rate in Malta which stood at 3.5% in March 2019 (Eurostat, 2019). A further 16% of participants were retired. Those aged 16 years or under, as well as persons who could not work due to illness or disability and those taking care of the house and/or family, made up the 'other inactive' labour status (29%). Over half of the sample (54%) were employed, which includes individuals who were self-employed (Table 10).

Table 10. Main labour status

Main labour status	Frequency	Percent
Employed (including self-employed)	546	54%
Unemployed	5	1%
Retired	165	16%
Other inactive	291	29%

Those participants aged 16 years or younger were automatically classified as being single in terms of marital status (Table 11). The majority of participants (60%) were married, followed by 34% who were single (and never married) or whose marriages had been annulled. A small percent of participants were either widowed (4%), or separated or divorced (3%).

Table 11. Marital status

Marital status	Frequency	Percent
Single (never married)/Annulled	339	34%
Married	605	60%
Separated/Divorced	28	3%
Widowed	37	4%

Of the participants aged 18 years and above whose marital status was 'single', slightly more than half (54.4%) were not currently in a relationship. The remaining 45.6% were currently in a relationship (Table 12).

Table 12. Relationship status

Currently in a relationship	Frequency	Percent
Yes	109	45.6%
No	130	54.4%

Most participants (61.3%) lived with a spouse or partner, followed by 28.7% who were living with their parent(s) or guardian(s), including foster parents. Slightly fewer than a quarter of participants (23.2%) were living with their children, whilst 11.2% were living with other family members. Only 1% were living with other persons who were neither a spouse/partner nor another family member. Participants were able to provide more than one response to describe their household composition, with the exception of those living alone who made up 5.5% of the sample (Table 13).

Table 13. Household composition

Household composition	Frequency	Percent
Currently live with parent(s)/guardian(s) (including foster parents)	290	28.7%
Currently live with spouse/partner	619	61.3%
Currently live with son(s)/daughter(s)	234	23.2%
Currently live with other family members	113	11.2%
Currently live with other persons	10	1%
Currently live alone	55	5.5%

Participants predominantly resided in a dwelling that is owned (either through freehold or with ground rent), with this group making up 89.3% of the sample. 7.5% were residing in rented accommodation, 2.7% were living in their home free-of-charge, and 0.4% were not able to respond to this question (Table 14).

Table 14. Dwelling rented or owned

Dwelling owned / rented	Frequency	Percent
Owned (freehold or with ground rent)	901	89.3%
Rented	76	7.5%
Used free-of-charge	27	2.7%
Do not know	5	0.5%

Table 15 displays the data for participants aged above 18 years old, excluding individuals who were living in rented accommodation or free-of-charge accommodation. The great majority (79.1%) were living in a dwelling which did not have its mortgage paid off, with the remaining 20.9% living in a dwelling on which the mortgage was already paid off.

Table 15. Mortgage paid on dwelling

Mortgage paid on dwelling	Frequency	Percent
Yes	170	20.9%
No	643	79.1%

Most participants (71.3%) perceived their household income to be adequate, however 18.9% felt that their household income was low. A relatively small number (6%) perceived their income to be high, whilst 3.8% of participants did not know whether their income was sufficient to meet their financial needs (Table 16).

Table 16. Perception of household income

Perception of household income	Frequency	Percent
High	61	6%
Adequate	719	71.3%
Low	191	18.9%
Do not know	38	3.8%

Participants were asked how strong they consider their sense of belonging to their neighbourhood to be, and most (43%) considered their sense of belonging to be moderately strong. A quarter had a very strong sense of belonging, followed by 19.6% who had a slightly strong sense of belonging to their neighbourhood. A smaller proportion (11.5%) did not consider themselves to have a strong sense of belonging to their neighbourhood at all, whilst 0.9% did not know (Table 17).

Table 17. Strength of sense of belonging to neighbourhood

Strength of sense of belonging to own neighbourhood	Frequency	Percent
Very strong	252	25%
Moderately strong	434	43%
Slightly strong	198	19.6%
Not strong at all	116	11.5%
Do not know	9	0.9%

More than half of the sample (53.7%) reported that their health in general was good, followed by almost a quarter (24.7%) who rated their health as fair and 17% who rated their health as very good. Only a small number rated their general health as bad (3.5%) or very bad (1%) (Table 18).

Table 18. Self-rated general health

General health	Frequency	Percent
Very good	172	17%
Good	542	53.7%
Fair	249	24.7%
Bad	35	3.5%
Very bad	10	1%

Two questions were used to assess participants' overall subjective wellbeing. To assess participants' self-rated coping ability (Table 19), participants were asked how well they feel they can cope with stressful events and unpleasant emotions. Most (40.9%) felt that their coping ability was good, and similarly 37.9% rated their coping ability as fair. 11.7% felt that their ability to cope was very good, whereas the remaining participants rated their coping ability as bad (6.7%) or very bad (2.8%).

Table 19. Self-rated coping ability

Coping ability	Frequency	Percent
Very good	118	11.7%
Good	413	40.9%
Fair	382	37.9%
Bad	68	6.7%
Very bad	28	2.8%

The second measure of subjective wellbeing asked participants whether, overall, they felt positive about their life (Table 20). The overwhelming majority (90.1%) affirmed that they felt positive about their life overall, whilst 9.9% did not feel positive overall about their life.

Table 20. Subjective wellbeing

Feel positive about life	Frequency	Percent
Yes	909	90.1%
No	100	9.9%

When asked whether they smoked any tobacco products (excluding the use of electronic cigarettes), most replied that they do not smoke (82.2%) and 17.8% replied that they do smoke tobacco products (Table 21).

Table 21. Tobacco use

Smoke tobacco	Frequency	Percent
Yes	180	17.8%
No	829	82.2%

7.5% of participants had some form of disability, defined as problems with vision, hearing, communication, movement activities, learning difficulties, or intellectual disability. The other 92.5% of participants did not have any form of a disability (Table 22).

Table 22. Presence of a disability

Presence of a disability	Frequency	Percent
Yes	76	7.5%
No	933	92.5%

Of those participants with some form of disability, Table 23 presents details of any limitations to their accessibility experienced as a result of their disability. Close to half of the participants expressed that their disability limited access to socialising events (48.7%) and leisure activities (45%). Access to support services, such as government, voluntary, or private support services was limited for 14% of participants.

Table 23. Limited accessibility due to disability

Limited accessibility due to disability	Response	Frequency	Percent
Limited access to socialising	Yes	37	48.7%
	No	39	51.3%
Limited access to support services	Yes	11	14%
	No	65	86%
Limited access to leisure activities	Yes	34	45%
	No	42	55%

A final sociodemographic question was used to determine the level of active citizenship of participants by asking whether they were currently a member of any organisation, such as a Non-Governmental Organisation, youth group, or culture or sports organisation. Slightly over a quarter of participants (25.8%) were members of an organisation, whilst the remaining 74.2% were not (Table 24).

Table 24. Member of organisation

Member of an organisation	Frequency	Percent
Yes	260	25.8%
No	749	74.2%

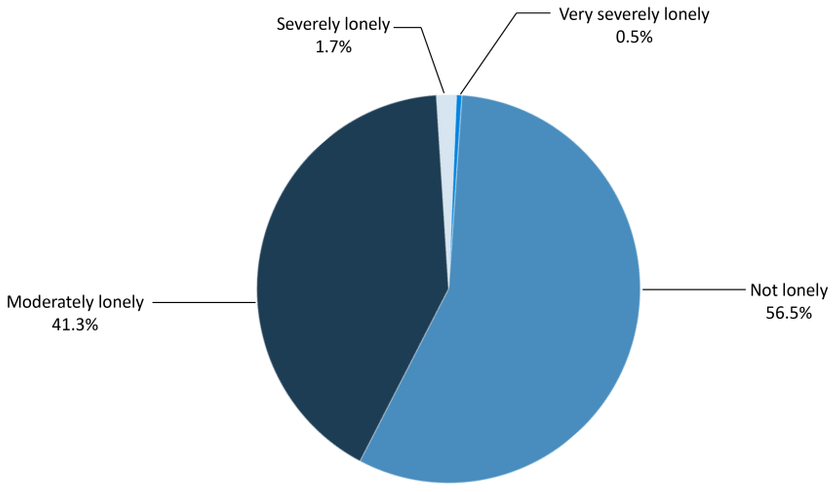
3.2 Prevalence of Loneliness

3.2.1 Total loneliness scores.

In order to provide an account of the data which is representative of the target population, the data below are presented according to the weighted sample of 428,967 persons (see section 2.8 'Weighting of results' of the methodology chapter for an explanation of the weighting procedure).

More than 1 in 3 people in Malta experience some degree of loneliness.

Figure 1: Distribution of loneliness scores

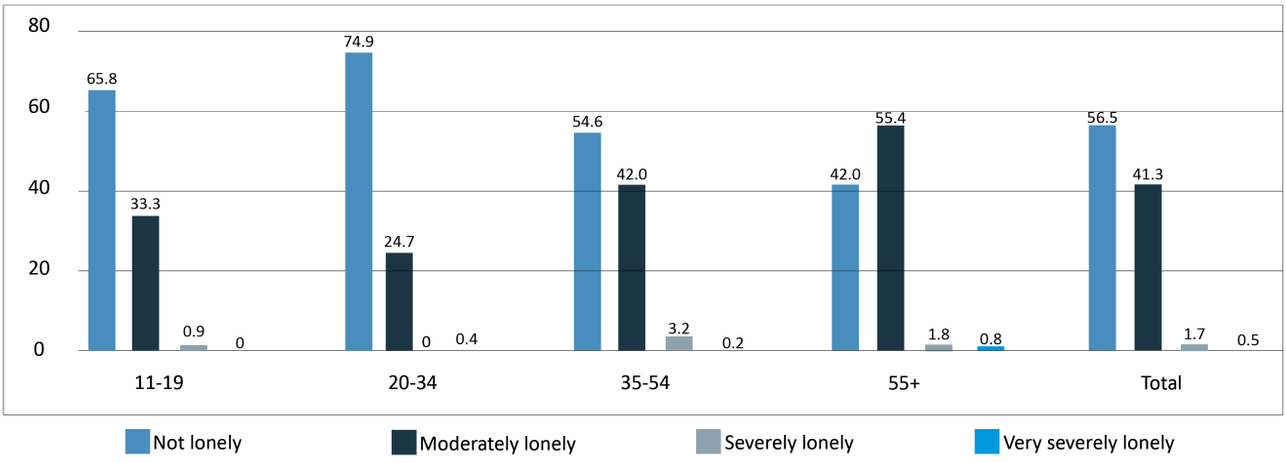


Total Loneliness Scores amongst the sample ranged from 0 (not lonely) to 11 (extremely lonely) (Figure 1). A total of 43.4% of participants reported some degree of loneliness (41.3% moderately lonely, 1.7% severely lonely, and 0.5% very severely lonely).

Individuals aged between 20-34 years comprised the highest percentage of not lonely participants, at 74.9%. Individuals aged 55 years or above made up the highest proportion of moderately lonely participants, at 55.4%. Participants aged between 35-54 years reported the highest rates of severe loneliness, with 3.2% of this age group obtaining a total loneliness score of between 3-8. Figure 2 displays the prevalence of loneliness according to the different age groups surveyed.

1 in 3 young people in Malta aged 11-19 are moderately lonely.

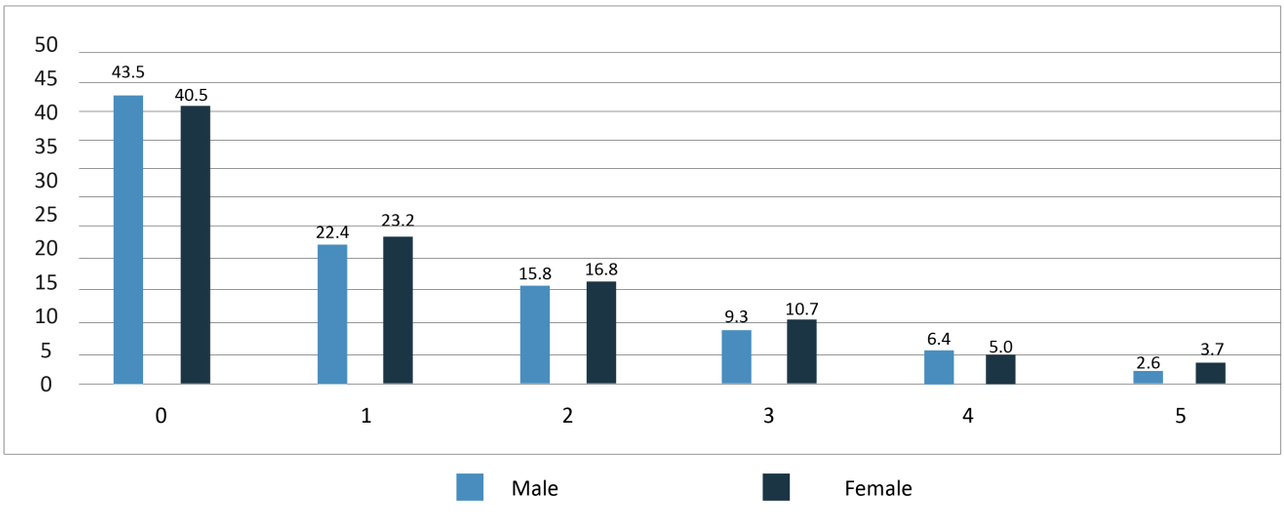
Figure 2: Prevalence of loneliness according to age group



3.2.2 Social and emotional loneliness scores.

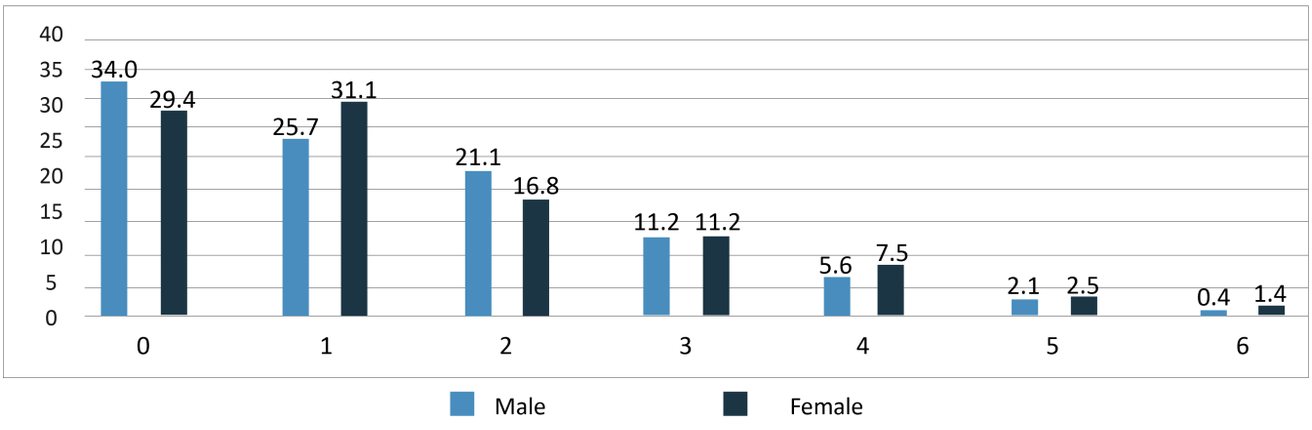
The De Jong Gierveld Loneliness Scale is made up of questions which determine social loneliness and emotional loneliness as two distinct dimensions that make up the experience of loneliness. The social loneliness score is calculated by counting the number of negative responses to certain questions on the De Jong Gierveld Scale. A person with a high social loneliness score would not always have someone to talk to about their day-to-day problems, would not have plenty of people to lean on when they have problems, would not feel that there are many people that they trust or feel close to, and would not feel that they can call on their friends when they need them.

Figure 3: Social loneliness scores by gender



As shown in Figure 3, a total of 18.3% of males, and 19.4% of females, scored 3 or above on the questions relating to social loneliness. Whilst females therefore demonstrated higher scores relating to social loneliness, it must be noted that more males (6.4%) than females (5%) obtained a score of 4 out of 5 with regards to social loneliness.

Figure 4: Emotional loneliness scores by gender



For the emotional loneliness score, a higher score indicates a higher likelihood that the person does not have a close friend, experiences a general sense of emptiness, longs for the pleasure of others' company, has a limited circle of friends and acquaintances, and often feels rejected. Therefore, an individual with an emotional loneliness score of 6 would have agreed with all those statements. Figure 4 above illustrates that females scored higher than males on emotional loneliness, with 11.4% of females scoring 4 or above, whereas 8.1% of males obtained the same scores.

3.3 Individual Item Analysis

3.3.1 Mean item scores amongst the sample.

The individual items on the De Jong Gierveld Loneliness Scale have the following response options for each question: Yes (1), more or less (2), or no (3). Table 25 displays the mean response value and standard deviation for each of the questions on the scale. The highest mean score is found for "I miss having a really close friend", indicating that the most frequently endorsed response was "no" to this item. The lowest mean score for the item "There is always someone I can talk to about my day-to-day problems" indicates that participants most frequently responded that there is someone they can talk to about their day-to-day problems.

Table 25. Individual item analysis amongst the whole sample

Individual Items	Mean	Std. Deviation
1. There is always someone I can talk to about my day-to-day problems	**1.17**	**0.532**
2. I miss having a really close friend	**2.88**	**0.438**
3. I experience a general sense of emptiness	2.53	0.738
4. There are plenty of people I can lean on when I have problems	1.36	0.691
5. I miss the pleasure of the company of others	2.36	0.853
6. I find my circle of friends and acquaintances too limited	2.78	0.556
7. There are many people I can trust completely	1.68	0.842
8. There are enough people I feel close to	1.23	0.558
9. I miss having people around me	2.36	0.859
10. I often feel rejected	2.87	0.438
11. I can call on my friends whenever I need them	1.45	0.756

3.3.2 Individual item analysis amongst the age groups.

The individual items on the De Jong Gierveld Loneliness Scale were further analysed in order to identify which responses were more commonly endorsed by different age groups. As can be seen in Table 26, age differences are evident for several items. As age increases, fewer people have someone to talk to about their day-to-day problems, have plenty of people to lean on when they have problems, find their circle of friends and acquaintances too limited, have many people they can trust completely, have enough people they feel close to, and can call on their friends whenever they need them.

The number of people one feels they can trust completely shows a steady decline with age amongst the Maltese population.

37.4% of young people in Malta aged 11-19 said that they miss the pleasure of other people's company.

Responses to certain items, however, indicate a non-linear relationship with regards to age. The 20-34 age group fared better than the younger 11-19 age group for the following items: "I miss having a really close friend", "I experience a general sense of emptiness", "I miss the pleasure of the company of others", "There are enough people I feel close to", "I miss having people around me", and "I often feel rejected". Following this trend, indicators of loneliness increase for the 35-54 and 55+ age groups, respectively.

Table 26. Individual item analysis amongst the age groups of the weighted sample

Individual Items	Response options	Age group				Chi-square (χ^2)
		11-19	20-34	35-54	55+	
		% age group				
There is always someone I can talk to about my day-to-day problems	Yes	96.6	93.5	91.2	83.3	**38.87*** **
	More or less	0.9	3.0	5.1	3.4	
	No	2.5	3.6	3.8	13.4	
I miss having a really close friend	Yes	4.1	1.7	5.3	6.3	**14.33***
	More or less	0.0	2.2	4.6	3.5	
	No	95.9	96.2	90.1	90.3	
I experience a general sense of emptiness	Yes	15.5	9.6	16.4	18.4	10.52
	More or less	17.9	18.3	16.6	18.8	
	No	66.6	72.1	67.0	62.8	
There are plenty of people I can lean on when I have problems	Yes	88.9	88.2	71.2	67.5	**52.04*** **
	More or less	4.0	7.9	13.6	13.6	
	No	7.1	4.0	15.3	18.9	
I miss the pleasure of the company of others	Yes	37.4	18.2	23.7	29.0	**34.61*** **
	More or less	15.7	8.5	17.4	16.5	
	No	46.9	73.3	58.9	54.5	
I find my circle of friends and acquaintances too limited	Yes	5.0	5.9	7.8	9.0	**16.30** **
	More or less	3.1	6.0	8.0	12.6	
	No	92.0	88.1	84.1	78.4	
There are many people I can trust completely	Yes	78.4	69.0	50.8	49.0	**48.43*** **
	More or less	6.9	12.7	19.9	20.2	
	No	14.8	18.4	29.3	30.8	
There are enough people I feel close to	Yes	91.8	92.8	81.5	75.8	**43.41*** **
	More or less	2.2	2.6	9.9	15.8	
	No	5.9	4.7	8.5	8.4	
I miss having people around me	Yes	30.4	19.3	26.7	26.6	**16.18** **
	More or less	8.3	9.1	12.2	15.5	
	No	61.4	71.6	61.1	57.9	
I often feel rejected	Yes	3.6	2.2	5.7	3.7	9.93
	More or less	6.4	2.1	5.8	5.2	
	No	90.0	95.7	88.5	91.1	
I can call on my friends whenever I need them	Yes	83.8	82.9	68.3	57.4	**57.32*** **
	More or less	8.0	6.2	14.3	17.7	
	No	8.2	10.9	17.4	24.9	

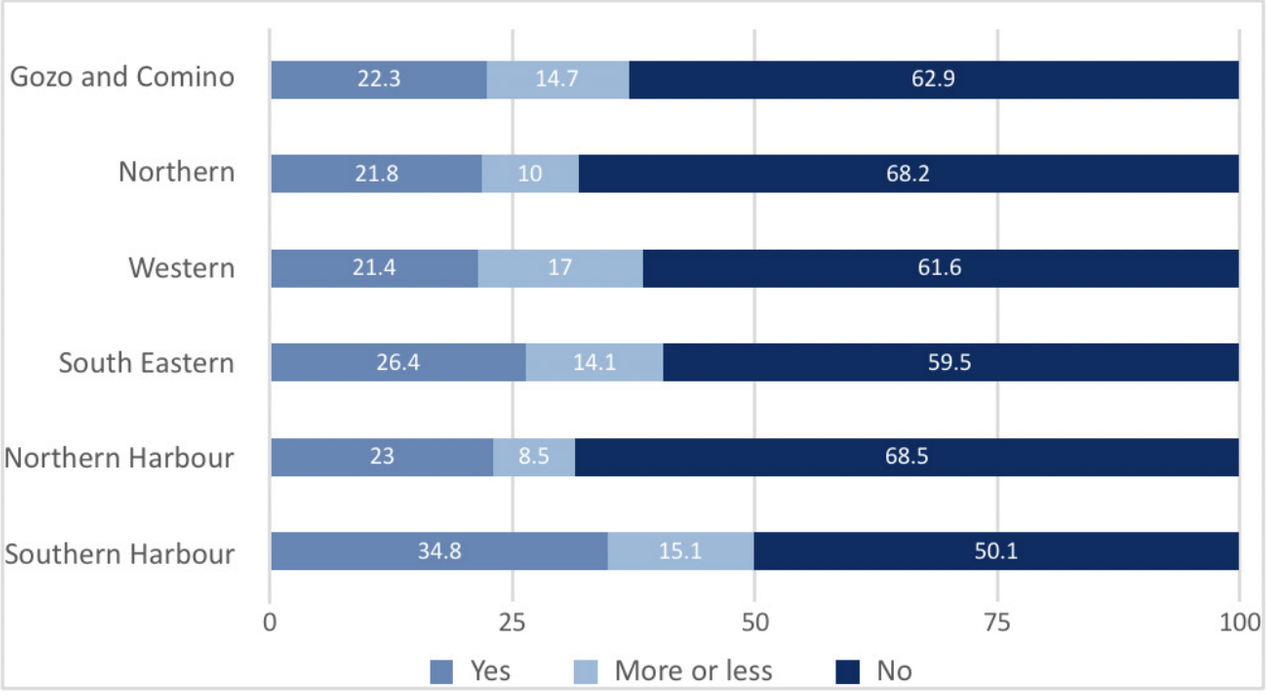
*p=0.05 **p=0.01 ***p=0.001

Further analysis revealed a statistically significant relationship between most of the individual items and participants' age group. The only items which were not significantly associated with age group were "I experience a general sense of emptiness" and "I often feel rejected".

3.3.3 Individual item analysis according to residential district.

Differences in individual item responses according to district were also analysed using a Chi-square test of association. A single item, "I miss having people around me", was found to be statistically significant, χ^2 (10, N = 428,967) = 24.56, $p < 0.006$. Individuals residing in the Southern Harbour (Cospicua; Fgura; Floriana; Ħal Luqa; Ħaż-Żabbar; Kalkara; Marsa; Paola; Santa Luċija; Senglea; Ħal Tarxien; Valletta; Vittoriosa; Xgħajra) were more likely to miss having people around them (Figure 5).

Figure 5: Responses to "I miss having people around me" according to district



3.3.4 Individual item analysis according to gender.

Gender differences can also be seen when observing responses to individual items on the De Jong Gierveld Loneliness Scale (Table 27). A Chi-Square test of independence was used to determine whether any significant associations were found for the individual items according to participants' gender. Only one item, "I often feel rejected", was statistically significant, χ^2 (2, N = 428,967) = 7.12, $p < 0.03$. Females were more likely to often feel rejected than were males.

Females in Malta struggle with feelings of rejection more than males.

Table 27. Individual item analysis according to gender of the weighted sample

Individual Items	Responses	Gender	
		Male	Female
		% gender	
There is always someone I can talk to about my day-to-day problems	Yes	89.6	89.4
	More or less	3.1	4.0
	No	7.3	6.6
I miss having a really close friend	Yes	4.3	4.9
	More or less	2.9	3.4
	No	92.8	91.7
I experience a general sense of emptiness	Yes	14.1	16.4
	More or less	15.8	20.2
	No	70.1	63.4
There are plenty of people I can lean on when I have problems	Yes	75.0	76.9
	More or less	10.8	11.7
	No	14.3	11.4
I miss the pleasure of the company of others	Yes	26.7	24.0
	More or less	15.2	14.0
	No	58.1	62.1
I find my circle of friends and acquaintances too limited	Yes	7.6	7.3
	More or less	6.9	10.5
	No	85.5	82.2
There are many people I can trust completely	Yes	60.4	54.3
	More or less	14.8	19.1
	No	24.8	26.5
There are enough people I feel close to	Yes	82.9	83.9
	More or less	8.8	9.9
	No	8.3	6.2
I miss having people around me	Yes	25.8	24.4
	More or less	10.4	14.0
	No	63.8	61.6
I often feel rejected	Yes	**3.8**	**4.0**
	More or less	**3.0**	**6.5**
	No	**93.2**	**89.5**
I can call on my friends whenever I need them	Yes	71.7	67.7
	More or less	11.6	14.0
	No	16.6	18.4

3.4 Prevalence of Loneliness according to Sociodemographic Variables

The weighted sample data set was subjected to cross-tabulations to assess the prevalence of loneliness according to each of the socio-demographic variables, as well as to identify any significant associations that were present. A number of variables were significantly associated with loneliness scores (Table 28). These are: age, level of education, labour status, marital status, living with one's parent(s) or guardian(s), living alone, whether the mortgage is paid on one's dwelling, perception of how adequate one's household income is, subjective physical health, subjective coping ability, subjective well-being, and the presence of a disability.

Maltese people who live alone experience higher rates of loneliness than those who live with others.

The highest rates of severe or very severe loneliness can be found among individuals who rate their ability to cope with stressful events and unpleasant emotions as very bad (13.5%), those who live alone (11.6%), and widowed persons (10%). Individuals who rate their general physical health as bad (8.6%) and feel negative about their lives overall also demonstrate relatively high rates of severe or very severe loneliness (8.4%)

Significant associations with marital status and loneliness reveal that individuals who are separated or divorced are more likely to be lonely than married or single persons, with 53% of separated or divorced individuals experience some form of loneliness. However, married persons are more likely to be lonely than those who are single, with 47% of married individuals being lonely compared to 31% of those who are single (never married) or whose marriage has been annulled.

Almost half of those with a disability (48.7%) have limited access to socializing events as a result of their disability.

The presence of a disability was also found to significantly increase the likelihood that a person will experience loneliness. Those with a disability experience higher rates of severe or very severe loneliness (6.1%) and moderate loneliness (51.5%) compared to those without a disability.

28. Prevalence of loneliness for sociodemographic and health variables

Variable and range	Severely or Very Severely Lonely (%)	Moderately Lonely (%)	Not Lonely (%)	Chi-square (χ^2)
Age				**36.11*** **
11-19	0.9	33.3	65.8	
20-64	2.2	36.8	61.0	
65+	2.5	57.7	39.8	
Gender				0.91
Male	2.1	39.9	58.0	
Female	2.1	42.8	55.0	
Country of birth				2.71
Malta	2.1	41.7	56.3	
EU country	0	50	50	
Non-EU country	0	30.8	69.2	
Highest level of education				**60.69*** **
Primary or lower	3.3	53.9	42.8	
Secondary	2.5	47.6	49.9	
Post-secondary non-tertiary	1.6	35.9	62.5	
Tertiary	0.8	24.4	74.8	
Labour status				**31.24*** **
Employed (including self-employed)	1.5	34.6	63.9	
Unemployed	0.0	40.0	60.0	
Retired	2.9	55.2	41.9	
Other inactive	2.9	46.1	51.1	
Marital status				**44.88*** **
Single (never married)/Annulled	1	33	66	
Married	2	45	53	
Separated/Divorced	7	46	46	
Widowed	10	69	21	
Currently in a relationship				1.8
Yes	0.9	30.3	68.8	
No	2.3	41.5	56.2	
Household composition				
Live with parent(s)/guardian(s)	0.9	31.3	67.8	**22.49*** **
Live with spouse/partner	1.9	44.1	54.0	2.41
Live with son(s)/daughter(s)	1.8	47.8	50.4	3.69
Live with other family members	1.9	43.0	55.1	0.21
Live with other persons	0	50	50	
Live alone	11.6	46.7	41.7	**27.93*** **

Table 28: Prevalence of loneliness for sociodemographic and health variables (continued)

Dwelling owned or rented				4.73
Owned (freehold or with ground rent)	1.6	41	57.5	
Rented	5.3	47.4	47.4	
Used free-of-charge	7.4	40.7	51.9	
Do not know	0	20	80	
Mortgage paid on dwelling				**26.23*** **
Yes	2.1	25.5	72.4	
No	1.8	46.7	51.5	
Perception of household income				**39.92*** **
High	1.6	39.3	59	
Adequate	1	37.4	61.6	
Low	5.8	54.5	39.8	
Do not know	2.6	52.6	44.7	
Strength of sense of belonging to neighbourhood				10.92
Very strong	0.7	39.2	60.1	
Moderately strong	1.7	40.7	57.6	
Slightly strong	3.1	42.9	54.0	
Not strong at all	4.9	46.0	49.1	
Subjective physical health				**47.91*** **
Very good	0	33.1	66.9	
Good	1.5	36.7	61.8	
Fair	3.6	53	43.4	
Bad	8.6	62.9	28.6	
Very bad	0	70	30	
Subjective coping ability				**71.96*** **
Very good	1.8	29.0	69.2	
Good	0.9	33.8	65.3	
Fair	2.3	48.5	49.3	
Bad	3.5	54.4	42.1	
Very bad	13.5	65.9	20.6	
Subjective wellbeing				**60.94*** **
Positive	1.4	38.4	60.2	
Negative	8.4	65.8	25.8	
Smoke tobacco products				1.45
Yes	1.9	45.2	52.9	
No	2.2	40.5	57.4	
Presence of disability				**11.68*** **
Yes	6.1	51.1	42.7	
No	1.8	40.5	57.7	
Active citizenship				4.29
Yes	1.1	37.0	61.9	
No	2.5	42.7	54.8	

*** Significant at the <0.001 level.

Level of education was also significantly associated with loneliness, with rates of loneliness decreasing the higher one's level of education is; Those with a primary or lower level of education experienced the highest rates of severe or very severe loneliness (3.3%), followed by those with a secondary level of education (2.5%), post-secondary or non-tertiary education level (1.6%). In contrast, less than one percent (0.8%) of tertiary-educated individuals were classified as severely or very severely lonely.

Living with one's parent(s) or guardian(s) was also significantly associated with loneliness, with those living with their parents or guardians being less likely to be lonely.

People in Malta who perceive their household income to be low are lonelier than those who perceive their income to be high or adequate.

Whether the mortgage is paid on one's dwelling was significantly associated with loneliness, for those living in owned accommodation. Individuals whose mortgage had not yet been paid are more likely to be lonely than those whose mortgage has been paid. Perception of household income was another variable that was significantly associated with loneliness. Individuals who perceive their household income to be low are more likely to be lonely than those who perceive their household income to be high or adequate.

Labour status was another factor associated with loneliness. Retired individuals are more likely to be lonely, with over half of retired persons (58.1%) experiencing some form of loneliness compared to lower rates for those who are in employment (36.1%). Higher rates of loneliness are also experienced by persons otherwise not in employment (including students, persons unable to work due to illness or disability, or those taking care of the house and/or family) (48.9%), as well as the unemployed (40%).

People who are in employment experience less loneliness than those who are retired, unemployed, or otherwise not working.

CHAPTER 4
CONCLUSION AND RECOMMENDATIONS

4.1 Summary of Main Findings

The present study has revealed that a number of socio-demographic characteristics are significantly associated with the prevalence of loneliness amongst the Maltese population, for individuals aged 11 years and over. Subjective wellbeing, living alone, self-rated physical health, marital status, presence of a disability, level of education, and labour status were all found to be associated with whether or not a person experiences loneliness. In addition, variables related to a person's financial situation – such as whether the mortgage on one's dwelling is paid, as well as one's perception of how adequate one's household income is - were also significantly linked to loneliness.

These significant associations indicate that individuals are more likely to be lonely if they have lower subjective wellbeing and coping abilities, live alone, are widowed, separated, or divorced, are disabled, or rate their general physical health as bad. Individuals who have completed higher levels of education are less likely to be lonely than those who have completed lower levels of education.

The probability of experiencing loneliness is higher for people living in accommodation that is owned, but where the mortgage has not been paid off, and for people who consider their household income to be low. Individuals who are engaged in employment have lower chances of being lonely than retired, unemployed, or otherwise inactive persons.

4.2 Limitations of the Study

Notwithstanding the strengths of the present study, such as the use of a large and representative population-based sample in conjunction with a standardised measure of loneliness, the study is not without its limitations. The cross-sectional nature of the study, where individuals were surveyed at a specific point in time, prevents the establishment of any causal relationships between variables. Longitudinal studies measuring any differences in loneliness over time, would redress this limitation.

Another important limitation is that the target population for the present study consisted of individuals living in Maltese households, and this resulted in certain individuals not being included in the data; Those individuals residing in institutions such as homes for the elderly, or people residing in penal institutions or in care, are therefore missing from the present study's data.

There are also limitations present that are inherent to self-report surveys, whereby response bias may result in participants either under- or over-reporting their experiences related to loneliness. Finally, this study used closed-ended questions to survey loneliness and relevant sociodemographic variables amongst the Maltese population aged 11 years and above. This means that participants were not given the opportunity to provide further in-depth information to accompany their responses.

4.3 Recommendations

This study recommends that a number of stakeholders undertake the following actions:

4.3.1 For monitoring and research.

Government, with the support of the University of Malta, to establish a unit whose purpose is to monitor the phenomenon of loneliness in Malta.

The National Statistics Office (NSO), University researchers, and Government to include items on loneliness in their diverse monitoring activities.

Government to allocate funding in the annual budget for the purposes of commissioning further research by the Faculty for Social Wellbeing into loneliness.

The Faculty for Social Wellbeing to replicate the loneliness prevalence study in the general population every five years in order to monitor trends.

The Faculty for Social Wellbeing to engage in further research that explores the sociodemographic variables that are significantly associated with loneliness in greater detail.

The Faculty for Social Wellbeing to engage in qualitative research with hard to reach populations, including individuals residing in institutions, and to produce thematic reports on the topic.

The Faculty for Social Wellbeing to conduct research which further investigates quality of life and subjective wellbeing which, in this study, was significantly correlated with the experience of loneliness.

4.3.2 For policy.

The Faculty for Social Wellbeing, in collaboration with Government and NGOs, to provide leadership in the development of a national strategy to combat loneliness.

Government to address rising cost of living rates given the impact that financial insecurity can have on loneliness and subsequently on physical health outcomes.

Government, in collaboration with Local Government, to engage in town planning that fosters a sense of community through the use of public spaces.

Government to support the creation of initiatives by Local Government and organisations that enable people's relationships.

Government to place loneliness higher on the public mental health agenda and build a culture that supports connected communities.

4.3.3 For prevention and practice.

Government and NGOs to develop community infrastructure that empowers social connections. This could involve improving areas which lack green spaces to benefit members of the community and supporting campaigns that encourage residents to improve green spaces whilst fostering a sense of connectedness.

Government and NGOs to develop supported socialisation services which connect individuals experiencing loneliness with community services and groups, whilst paying particular attention to include the populations identified as being at risk of loneliness (e.g. persons with a disability, widowed persons, etc).

NGOs to develop wider community groups to facilitate better integration into the community and reduce stigma.

Government, through social care agencies, to provide evidence-based interventions for individuals.

The Faculty for Social Wellbeing to provide training on loneliness issues for professionals working with the general population.

Professionals in primary care to engage in social prescribing, by referring patients experiencing loneliness to appropriate community services.

NGOs to facilitate 'Homeshare' projects which connect homeowners requiring support or companionship (such as older persons, widowers, and those living alone) with people in need of affordable housing.

Government and NGOs, in collaboration with the Faculty for Social Wellbeing, to assess and improve initiatives that improve accessibility to social and leisure activities amongst persons with a disability.

4.4 Final Note

This study has provided empirical evidence of the prevalence of loneliness, as well as the significantly associated socio-demographic variables that are implicated in the experience of loneliness, amongst a nationally representative sample of the Maltese population aged 11 years up until old age. The findings underscore the importance of considering loneliness as an essential element in individuals' wellbeing, encompassing social, emotional, and physical health.

The implementation of the proposed recommendations for research, policy, and practice provide a starting point from which the issue of loneliness can be better understood and addressed in the community. An organised and concerted effort is required from relevant stakeholders at the levels of national and local government, as well as non-governmental organisations and the academic community. Fostering improved collaboration across these entities is believed to be crucial in effectively tackling loneliness and improving social connectedness amongst members of Maltese society.

REFERENCES

Amieva, H., Stoykova, R., Matharan, F., Helmer, C., Antonucci, T. C., & Dartigues, J. F. (2010). What aspects of social network are protective for dementia? Not the quantity but the quality of social interactions is protective up to 15 years later. *Psychosomatic medicine*, *72*(9), 905-911.

Archibald, F. S., Bartholomew, K., & Marx, R. (1995). Loneliness in early adolescence: A test of the cognitive discrepancy model of loneliness. *Personality and Social Psychology Bulletin*, *21*(3), 296-301.

Arpin, S. N., & Mohr, C. D. (2019). Transient Loneliness and the Perceived Provision and Receipt of Capitalization Support Within Event-Disclosure Interactions. *Personality and Social Psychology Bulletin*, *45*(2), 240-253.

Baker, D. (2012). *All the Lonely People: loneliness in Australia*, 2001-2009, The Australia Institute.

Baldacchino, G. (2016). Foreword. In: Brown, M. & Briguglio, M. (Eds.), *Sociology of the Maltese Islands*. (pp. 1-5). Malta: Miller Publishers.

Bartels, M., Cacioppo, J. T., Hudziak, J. J., & Boomsma, D. I. (2008). Genetic and environmental contributions to stability in loneliness throughout childhood. *American Journal of Medical Genetics Part B: Neuropsychiatric Genetics*, *147*(3), 385-391.

Beach, B., & Bamford, S. M. (2014). Isolation: The emerging crisis for older men. *A Report Exploring Experiences of Social Isolation and Loneliness Among Older Men in England*. Independent Age: London.

Bekhet, A., Zauszniewski, J., & Nakhla, W. (2008). Loneliness: a concept analysis. *Nursing Forum*, *43*, 207-213.

Beutel, M. E., Klein, E. M., Brähler, E., Reiner, I., Jünger, C., Michal, M., ... & Tibubos, A. N. (2017). Loneliness in the general population: prevalence, determinants and relations to mental health. *BMC psychiatry*, *17*(1), 97.

Biolcati, R., & Cani, D. (2015). Feeling alone among friends: Adolescence, social networks and loneliness. *Webology*, *12*(2), 1.

Bondin, D. (2017). *Leisure among older widowed Maltese women* (Masters dissertation). Retrieved from University of Malta Open Access Repository.

Borys, S., & Perlman, D. (1985). Gender differences in loneliness. *Personality and Social Psychology Bulletin*, *11*(1), 63-74.

Brage, D., Meredith, W. M., & Woodward, J. (1993). Correlates of loneliness among Midwestern adolescents. *Adolescence*, *28*(111), 685-694

.

Brennan, T. (1982). Loneliness at adolescence. In Peplau, L. A., and Perlman, D. (eds.), *Loneliness: A Sourcebook of Current Theory, Research and Therapy*. Wiley, New York.

Brunes, A., Hansen, M. B., & Heir, T. (2019). Loneliness among adults with visual impairment: prevalence, associated factors, and relationship to life satisfaction. *Health and quality of life outcomes*, *17(*1), 24.

Buz, J., Urchaga, D., & Polo, M. E. (2014). Análisis factorial confirmatorio de la escala de soledadde De Jong Gierveld en personas mayores españolas. *Anales de Psicología/ Annals of Psychology*, *30*(2), 588-596.

Cacioppo, J. T., & Hawkley, L. C. (2009). Perceived social isolation and cognition. *Trends in cognitive sciences*, *13*(10), 447-454.

Cacioppo, J. T., & Patrick, W. (2008). *Loneliness: Human nature and the need for social connection*. New York, NY, US: W W Norton & Co.

Cacioppo, J. T., Hughes, M. E., Waite, L. J., Hawkley, L. C., & Thisted, R. A. (2006). Loneliness as a specific risk factor for depressive symptoms: cross-sectional and longitudinal analyses. *Psychology and aging*, *21*(1), 140.

Cacioppo, S., Grippo, A. J., London, S., Goossens, L., & Cacioppo, J. T. (2015). Loneliness: Clinical import and interventions. *Perspectives on Psychological Science*, *10*(2), 238-249.

Care Connect. (2017). More than a mealtime shared tables: Sharing and Enjoying food together*. University of Sheffield*. Retrieved from s3-eu-west-1.amazonaws.com

Caruana, C. (2017, September 9). Maltese least likely to live alone in EU, increase in childless homes. *Times of Malta.* Retrieved from timesofmalta.com

Caruana, C. (2018, October 26). A third of support line callers just wanted 'someone to listen'. Times of Malta. Retrieved from timesofmalta.com

Caspi, A., Harrington, H., Moffitt, T. E., Milne, B. J., & Poulton, R. (2006). Socially isolated children 20 years later: risk of cardiovascular disease. Archives of pediatrics & adolescent medicine, *160*(8), 805-811.

Caruana, C. (2018, October 26). A third of support line callers just wanted 'someone to listen'. *Times of Malta.* Retrieved from timesofmalta.com

Caspi, A., Harrington, H., Moffitt, T. E., Milne, B. J., & Poulton, R. (2006). Socially isolated children 20 years later: risk of cardiovascular disease. *Archives of pediatrics & adolescent medicine*, *160*(8), 805-811.

Cramer, K. M., & Neyedley, K. A. (1998). Sex differences in loneliness: The role of masculinity and femininity. *Sex roles*, *38*(7-8), 645-653.

Creed, P. A., & Reynolds, J. (2001). Economic deprivation, experiential deprivation and social loneliness in unemployed and employed youth. *Journal of Community & Applied Social Psychology*, *11*(3), 167-178.

Dahlberg, L., & McKee, K. J. (2014). Correlates of social and emotional loneliness in older people: evidence from an English community study. *Aging & mental health*, *18*(4), 504-514.

Davidson, L., Shahar, G., Lawless, M. S., Sells, D., & Tondora, J. (2006). Play, pleasure, and other positive life events:"Non–specific" factors in recovery from mental illness?. *Psychiatry: Interpersonal and Biological Processes*, *69*(2), 151-163.

De Jong Gierveld, J. (1998). A review of loneliness: concept and definitions, determinants and consequences. *Reviews in Clinical Gerontology*, *8*(1), 73-80.

De Jong Gierveld, J., & Kamphuis, F. (1985). The development of a Rasch-type loneliness scale. *Applied psychological measurement*, *9*(3), 289-299.

De Jong Gierveld, J., & Van Tilburg, T. (1999). Manual of the loneliness scale. *Amsterdam: Department of Social Research Methodology.*

De Jong-Gierveld, J., van Tilburg, T. G., & Dykstra, P. A. (2006). Loneliness and social isolation. In D. Perlman, & A. Vangelisti (Eds.), *The Cambridge handbook of personal relation ships* (pp. 485-500). Cambridge: Cambridge University Press.

Delgado, J. B., Litago, J. D. U., & González, M. E. P. (2014). Factor structure of the Jong Gierveld Loneliness scale in Spanish elderly adults. *Anales de psicología*, *30*(2), 588-596.

Demakakos, P., Nunn, S., & Nazroo, J. (2006). 10. Loneliness, relative deprivation and life satisfaction. *Retirement, health and relationships of the older population in England*, 297.

Diener, E., Gohm, C. L., Suh, E., & Oishi, S. (2000). Similarity of the relations between marital status and subjective well-being across cultures. *Journal of cross-cultural psychology*, *31*(4), 419-436.

DiTommaso, E., Brannen, C., & Burgess, M. (2005). The universality of relationship characteristics: A cross-cultural comparison of different types of attachment and loneliness in Canadian and visiting Chinese students. *Social Behavior and Personality: an international journal*, *33*(1), 57-68.

Donaldson, J. M., & Watson, R. (1996). Loneliness in elderly people: an important area for nursing research. *Journal of advanced nursing*, *24*(5), 952-959.

Dykstra, P. A. (1993). The differential availability of relationships and the provision and effectiveness of support to older adults. *Journal of Social and Personal Relationships*, *10*(3), 355-370.

Dykstra, P. A., & de Jong Gierveld, J. (2004). Gender and marital-history differences in emotional and social loneliness among Dutch older adults. *Canadian Journal on Aging/La revue canadienne du vieillissement, 23*(2), 141-155.

Dykstra, P. A., Van Tilburg, T. G., & Gierveld, J. D. J. (2005). Changes in older adult loneliness: Results from a seven-year longitudinal study. *Research on aging*, *27*(6), 725-747.

Eaker, E. D., Sullivan, L. M., Kelly-Hayes, M., D'Agostino Sr, R. B., & Benjamin, E. J. (2007). Marital status, marital strain, and risk of coronary heart disease or total mortality: the Framingham Offspring Study. *Psychosomatic medicine*, *69*(6), 509-513.

Ekwall, A. K., Sivberg, B., & Hallberg, I. R. (2005). Loneliness as a predictor of quality of life among older caregivers. *Journal of advanced nursing*, *49*(1), 23-32.

Ellwardt, L., Aartsen, M., Deeg, D., & Steverink, N. (2013). Does loneliness mediate the relation between social support and cognitive functioning in later life?. *Social science & medicine, 98*, 116-124.

Essex, M. J., & Nam, S. (1987). Marital status and loneliness among older women: The differential importance of close family and friends. *Journal of Marriage and the Family*, 93-106.

Eurostat. (2019). March 2019 Euro area unemployment at 7.7%. *News release: Euro indicators.* Retrieved from ec.europa.eu

Flood, M. (2005). *Mapping loneliness in Australia*. Discussion Paper 76. Canberra: Australia Institute.

Franklin, A & Tranter, B (2008), *Loneliness in Australia* Paper No 13, Housing and Community Research Unit, University of Tasmania, Hobart.

Friggieri, C. (2008). *Loneliness among University students*. (Bachelor dissertation). Retrieved from University of Malta Open Access Repository.

Gatt, J. P. (Producer), & Azzopardi, A. (Director). (2018). *Il-Ġerħa tas-Solitudni: Il-mixja lejn soluzzjonijiet* [Documentary]. Malta: University of Malta.

Gençöz, T., Özlale, Y., & Lennon, R. (2004). Direct and indirect effects of social support on psychological well-being. *Social Behavior and Personality: an international journal*, *32*(5), 449-458.

Gilbey, A., & Tani, K. (2015). Companion animals and loneliness: A systematic review of quantitative studies. *Anthrozoös*, *28*(2), 181-197.

Gilmore, L., & Cuskelly, M. (2014). Vulnerability to loneliness in people with intellectual disability: An explanatory model. *Journal of Policy and Practice in Intellectual Disabilities*, *11*(3), 192-199.

Golden, J., Conroy, R. M., Bruce, I., Denihan, A., Greene, E., Kirby, M., & Lawlor, B. A. (2009). Loneliness, social support networks, mood and wellbeing in community-dwelling elderly. *International Journal of Geriatric Psychiatry: A journal of the psychiatry of late life and allied sciences*, *24*(7), 694-700.

Gov.mt. (n.d.). *The Maltese islands.* Retrieved from gov.mt.

Griffin, J. (2010). *The lonely society?*. London, England: Mental Health Foundation.

Grygiel, P., Humenny, G., & Rębisz, S. (2019). Using the de Jong Gierveld loneliness scale with early adolescents: Factor structure, reliability, stability, and external validity. *Assessment*, *26*(2), 151-165.

Grygiel, P., Humenny, G., Rebisz, S., Świtaj, P., & Sikorska, J. (2013). Validating the polish adaptation of the 11-item De Jong Gierveld loneliness scale. *European Journal of Psychological Assessment*, *29,* 129-139.

Guarneri, M. (2006). *The heart speaks: A cardiologist reveals the secret language of healing*. New York: Touchstone.

Hagan, R., Manktelow, R., Taylor, B. J., & Mallett, J. (2014). Reducing loneliness amongst older people: a systematic search and narrative review. *Aging & mental health*, *18*(6), 683-693.

Havens, B., & Hall, M. (2001). Social isolation, loneliness, and the health of older adults. *Indian Journal of Gerontology*, *14*, 144-153.

Hawkley, L. C., & Cacioppo, J. T. (2007). Aging and loneliness: Downhill quickly?. *Current Directions in Psychological Science*, *16*(4), 187-191.

Hawkley, L. C., & Cacioppo, J. T. (2010). Loneliness matters: a theoretical and empirical review of consequences and mechanisms. *Annals of behavioral medicine*, *40*(2), 218-227.

Hawkley, L. C., Hughes, M. E., Waite, L. J., Masi, C. M., Thisted, R. A., & Cacioppo, J. T. (2008). From social structural factors to perceptions of relationship quality and loneliness: the Chicago health, aging, and social relations study. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *63*(6), S375-S384.

Hawkley, L. C., Thisted, R. A., Masi, C. M., & Cacioppo, J. T. (2010). Loneliness predicts increased blood pressure: 5-year cross-lagged analyses in middle-aged and older adults. *Psychology and aging*, *25*(1), 132.

Heckhausen, J., Wrosch, C., & Schulz, R. (2010). A motivational theory of life-span development. *Psychological review*, *117*(1), 32.

Heinrich, L. M., & Gullone, E. (2006). The clinical significance of loneliness: A literature review. *Clinical psychology review*, *26*(6), 695-718.

Hensley, B., Martin, P., Margrett, J. A., MacDonald, M., Siegler, I. C., Poon, L. W., & The Georgia Centenarian Study 1. (2012). Life events and personality predicting loneliness among centenarians: Findings from the Georgia Centenarian Study. *The Journal of psychology*, *146*(1-2), 173-188.

HM Government. (2018). A connected society: A strategy for tackling loneliness – laying the foundations for change. *Department for Digital, Culture, Media and Sport: United Kingdom*. Retrieved from assets.publishing.service.gov.uk

Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: a meta-analytic review. *Perspectives on psychological science*, *10*(2), 227-237.

Holwerda, T. J., Deeg, D. J., Beekman, A. T., van Tilburg, T. G., Stek, M. L., Jonker, C., & Schoevers, R. A. (2014). Feelings of loneliness, but not social isolation, predict dementia onset: results from the Amsterdam Study of the Elderly (AMSTEL). *J Neurol Neurosurg Psychiatry*, *85*(2), 135-142.

Holwerda, T. J., Van Tilburg, T. G., Deeg, D. J., Schutter, N., Van, R., Dekker, J., ... & Schoevers, R. A. (2016). Impact of loneliness and depression on mortality: results from the Longitudinal Ageing Study Amsterdam. *The British Journal of Psychiatry*, *209*(2), 127-134.

Hopps, S. L., Pepin, M., Arseneau, I., Frechette, M., & Begin, G. (2001). Disability Related Variables Associated with Loneliness Among People with Disabilities. *Journal of Rehabilitation*, *67*(3).

Hutchison, D. & Woods, R. (2010) *ChildLine casenotes: Children talking to ChildLine about loneliness*. London: NSPCC.

Hyland, P., Shevlin, M., Cloitre, M., Karatzias, T., Vallières, F., McGinty, G., ... & Power, J. M. (2018). Quality not quantity: loneliness subtypes, psychological trauma, and mental health in the US adult population. *Social psychiatry and psychiatric epidemiology*, 1-11.

Iecovich, E. (2013). Psychometric properties of the Hebrew version of the de Jong Gierveld loneliness scale. *Educational Gerontology*, *39*(1), 12-27.

Ishmuhametov, I. (2006). Multifactor dynamic loneliness model. *Computer Modeling & New Technologies*, *10*, 82-88.

Karnick, P. M. (2005). Feeling lonely: Theoretical perspectives. *Nursing science quarterly*, *18*(1), 7-12.

Kawachi, I., Kennedy, B. P., Lochner, K., & Prothrow-Stith, D. (1997). Social capital, income inequality, and mortality. *American journal of public health*, *87*(9), 1491-1498.

Kearns, A., Whitley, E., Tannahill, C., & Ellaway, A. (2015). 'Lonesome town'? Is loneliness associated with the residential environment, including housing and neighbourhood factors?. J*ournal of Community Psychology*, *43*(7), 849-867.

Killeen C. (1998). Loneliness: an epidemic in modern society. *Journal of Advanced Nursing*, *28*, 762–770.

Kochenderfer-Ladd, B., & Wardrop, J. L. (2001). Chronicity and instability of children's peer victimization experiences as predictors of loneliness and social satisfaction trajectories. *Child development*, *72*(1), 134-151.

Koenig, L. J., Isaacs, A. M., & Schwartz, J. A. (1994). Sex differences in adolescent depression and loneliness: Why are boys lonelier if girls are more depressed?. *Journal of Research in Personality*, *28*(1), 27-43.

Ladd, G. W., & Ettekal, I. (2013). Peer-related loneliness across early to late adolescence: Normative trends, intra-individual trajectories, and links with depressive symptoms. *Journal of adolescence*, *36*(6), 1269-1282.

Lasgaard, M., Friis, K., & Shevlin, M. (2016). "Where are all the lonely people?" A population-based study of high-risk groups across the life span. *Social psychiatry and psychiatric epidemiology, 51*(10), 1373-1384.

Laursen, B., & Hartl, A. C. (2013). Understanding loneliness during adolescence: Developmental changes that increase the risk of perceived social isolation. *Journal of Adolescence*, *36*(6), 1261-1268.

Leicester Ageing Together. (2017). *A snap shot of comparisons between group and one to one interventions.* Retrieved from leicesterageingtogether.org.uk

Lim, L. L., & Kua, E. H. (2011). Living alone, loneliness, and psychological well-being of older persons in Singapore. *Current gerontology and geriatrics research*, 2011.

Luanaigh, C. Ó., & Lawlor, B. A. (2008). Loneliness and the health of older people. International Journal of *Geriatric Psychiatry: A journal of the psychiatry of late life and allied sciences*, *23*(12), 1213-1221.

Luhmann, M., & Hawkley, L. C. (2016). Age differences in loneliness from late adolescence to oldest old age. *Developmental Psychology*, *52*(6), 943.

Luo, Y., Hawkley, L. C., Waite, L. J., & Cacioppo, J. T. (2012). Loneliness, health, and mortality in old age: A national longitudinal study. *Social science & medicine*, *74*(6), 907-914.

Lykes, V. A., & Kemmelmeier, M. (2014). What predicts loneliness? Cultural difference between individualistic and collectivistic societies in Europe. *Journal of Cross-Cultural Psychology*, *45*(3), 468-490.

Macmillan, T., Ronca, M., Bidey, T., & Rembiszewski, R. (2018). Evaluation of the homeshare pilots. Final report. *Social Care Institute for Excellence*. Retrieved from housinglin.org.uk

Maes, M., Klimstra, T., Van den Noortgate, W., & Goossens, L. (2015). Factor structure and measurement invariance of a multidimensional loneliness scale: Comparisons across gender and age. *Journal of Child and Family Studies*, *24*(6), 1829-1837.

Maes, M., Qualter, P., Vanhalst, J., Van Den Noortgate, W., & Goossens, L. (2016). Gender differences in loneliness across the lifespan: A meta-analysis. In *Biennial meeting of the International Society for the Study of Behavioral Development*, Date: 2016/07/10-2016/07/14, Location: Vilnius, Lithuania.

Mahon, N. E., Yarcheski, A., & Yarcheski, T. J. (2001). Mental health variables and positive health practices in early adolescents. *Psychological reports*, *88*(3_suppl), 1023-1030.

Martin, I. (2016, December 7). Loneliness driving thousands of people to call emergency support hotline. *Times of Malta*. Retrieved from timesofmalta.com

Masi, C. M., Chen, H. Y., Hawkley, L. C., & Cacioppo, J. T. (2011). A meta-analysis of interventions to reduce loneliness. *Personality and Social Psychology Review*, *15*(3), 219-266.

McHugh, J. E., & Lawlor, B. A. (2013). Perceived stress mediates the relationship between emotional loneliness and sleep quality over time in older adults. *British journal of health psychology*, *18*(3), 546-555.

McWhirter, B. T., Besett-Alesch, T. M., Horibata, J., & Gat, I. (2002). Loneliness in high risk adolescents: The role of coping, self-esteem, and empathy. *Journal of Youth Studies*, *5*(1), 69-84.

Moustakas, C. E. (1972). Loneliness and love. Englewood Cliffs, NJ: Prentice-Hall

Musich, S., Wang, S. S., Hawkins, K., & Yeh, C. S. (2015). The impact of loneliness on quality of life and patient satisfaction among older, sicker adults. *Gerontology and Geriatric Medicine*, 1, 2333721415582119.

National Statistics Office (NSO). (2012). *Census of population and housing 2011*. Retrieved from nso.gov.mt.

National Statistics Office (NSO). (2019). *Regional statistics Malta: 2019 edition*. Retrieved from nso.gov.mt.

O'Rand, A. M. (2001). Stratification and the life course: The forms of life-course capital and their interrelationships. In: Binstock, R. H., George, L. K., (Eds). *Handbook of aging and the social sciences* (pp. 197-213). New York: Academic Press.

Özkan Tuncay, F., Fertelli, T., & Mollaoğlu, M. (2018). Effects of loneliness on illness perception in persons with a chronic disease. *Journal of clinical nursing*, *27*(7-8), e1494-e1500.

Page, R. M. (1990). High school size as a factor in adolescent loneliness. *The High School Journal*, *73*(3), 150-153.

Page, R. M., & Cole, G. E. (1991). Demographic predictors of self-reported loneliness in adults. *Psychological Reports*, *68*(3), 939-945.

Parkhurst, J. T., & Hopmeyer, A. (1999). Developmental change in the sources of loneliness in childhood and adolescence: Constructing a theoretical model. *Loneliness in childhood and adolescence*, 56-79.

Patterson, A. C., & Veenstra, G. (2010). Loneliness and risk of mortality: A longitudinal investigation in Alameda County, California. *Social science & medicine*, *71*(1), 181-186.

Penning, M. J., Liu, G., & Chou, P. H. B. (2014). Measuring loneliness among middle-aged and older adults: the UCLA and de Jong Gierveld Loneliness Scales. *Social Indicators Research*, *118*(3), 1147-1166.

Perlman, D., & Peplau, L. A. (1981). Toward a social psychology of loneliness. *Personal relationships*, *3*, 31-56.

Perlman, D., & Peplau, L. A. (1982). Theoretical approaches to loneliness. *Loneliness: A sourcebook of current theory, research and therapy*, 123-134.

Perlman, D., & Peplau, L. A. (1984). Loneliness research: A survey of empirical findings. *Preventing the harmful consequences of severe and persistent loneliness*, *13*, 46.

Pérodeau, G. M., & du Fort, G. G. (2000). Psychotropic drug use and the relation between social support, life events, and mental health in the elderly. *Journal of Applied Gerontology, 19*(1), 23-41.

Pinquart, M. (2003). Loneliness in married, widowed, divorced, and never-married older adults. *Journal of Social and personal relationships*, *20*(1), 31-53.

Pinquart, M., & Sorensen, S. (2001). Influences on loneliness in older adults: A meta-analysis. *Basic and applied social psychology, 23*(4), 245-266.

Poscia, A., Stojanovic, J., La Milia, D. I., Duplaga, M., Grysztar, M., Moscato, U., ... & Magnavita, N. (2018). Interventions targeting loneliness and social isolation among the older people: an update systematic review. *Experimental gerontology*, *102*, 133-144.

Qualter, P., Brown, S. L., Rotenberg, K. J., Vanhalst, J., Harris, R. A., Goossens, L., ... & Munn, P. (2013). Trajectories of loneliness during childhood and adolescence: Predictors and health outcomes. *Journal of Adolescence*, *36*(6), 1283-1293.

Qualter, P., Vanhalst, J., Harris, R., Van Roekel, E., Lodder, G., Bangee, M., ... Verhagen, M. (2015). Loneliness across the lifespan. *Perspectives on Psychological Science*, *10*, 250-264.

Rokach, A. (2004). Loneliness then and now: Reflections on social and emotional alienation in everyday life. *Current Psychology*, *23*(1), 24-40.

Rokach, A., & Neto, F. (2000). Causes of loneliness in adolescence: A cross-cultural study. *International Journal of Adolescence and Youth*, *8*(1), 65-80.

Rokach, A., Lechcier-Kimel, R., & Safarov, A. (2006). Loneliness of people with physical disabilities. *Social Behavior and Personality: an international journal*, *34*(6), 681-700.

Rook, K. S. (1984). The negative side of social interaction: impact on psychological well-being. *Journal of personality and social psychology*, *46*(5), 1097.

Ross, C. E., Mirowsky, J., & Pribesh, S. (2001). Powerlessness and the amplification of threat: Neighborhood disadvantage, disorder, and mistrust. *American sociological review*, *66*(4), 568.

Rote, S., Hill, T. D., & Ellison, C. G. (2012). Religious attendance and loneliness in later life. *The Gerontologist*, *53*(1), 39-50.

Rubenstein, C., Shaver, P., & Peplau, L. A. (1979). Loneliness. *Human Nature*, *2*(2), 58-65.

Russell, D., Peplau, L. A., & Cutrona, C. E. (1980). The revised UCLA Loneliness Scale: Concurrent and discriminant validity evidence. *Journal of Personality and Social Psychology*, *39*(3), 472-480. doi: 10.1037/0022-3514.39.3.472

Scharf, T., & de Jong Gierveld, J. (2008). Loneliness in urban neighbourhoods: an Anglo-Dutch comparison. *European Journal of Ageing, 5*(2), 103.

Scharf, T., Phillipson, C., & Smith, A. E. (2004). Poverty and social exclusion: growing older in deprived urban neighbourhoods. *Growing older: Quality of life in old age*, 81-106.

Seeman, T. E. (2000). Health promoting effects of friends and family on health outcomes in older adults. *American journal of Health promotion*, *14*(6), 362-370.

Shaver, P. R., & Brennan, K. A. (1991). Measures of depression and loneliness. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of social psychological attitudes, Vol. 1. Measures of personality and social psychological attitudes* (pp. 195-289). San Diego, CA, US: Academic Press. doi: 10.1016/B978-0-12-590241-0.50010-1

Sheridan, A. J., Drennan, J., Coughlan, B., O'Keeffe, D., Frazer, K., Kemple, M., ... & O'Callaghan, E. (2015). Improving social functioning and reducing social isolation and loneliness among people with enduring mental illness: Report of a randomised controlled trial of supported socialisation. *International Journal of Social Psychiatry, 61*(3), 241-250.

Shevlin, M., Murphy, S., Mallett, J., Stringer, M., & Murphy, J. (2013). Adolescent loneliness and psychiatric morbidity in Northern Ireland. *British journal of clinical psychology*, *52*(2), 230-234.

Shiovitz-Ezra, S., & Ayalon, L. (2010). Situational versus chronic loneliness as risk factors for all-cause mortality. *International Psychogeriatrics*, *22*(3), 455-462.

Shvedko, A., Whittaker, A. C., Thompson, J. L., & Greig, C. A. (2018). Physical activity interventions for treatment of social isolation, loneliness or low social support in older adults: A systematic review and meta-analysis of randomised controlled trials. *Psychology of Sport and Exercise*, *34*, 128-137.

Siette, J., Cassidy, M., & Priebe, S. (2017). Effectiveness of befriending interventions: a systematic review and meta-analysis. *BMJ open*, *7*(4), e014304.

Singh, B., & Kiran, U. V. (2013). Loneliness among elderly women. *International Journal of Humanities and Social Science Invention*, *2*(2), 10-14.

Sippola, L. K., & Bukowski, W. M. (1999). 14 Self, Other, and Loneliness From A Developmental Perspective. *In Loneliness in childhood and adolescence* (pp. 280-295). Cambridge University Press New York.

Steptoe, A., Shankar, A., Demakakos, P., & Wardle, J. (2013). Social isolation, loneliness, and all-cause mortality in older men and women. *Proceedings of the National Academy of Sciences*, *110*(15), 5797-5801.

Stokes, J. P., & Levin, I. (1986). Gender differences in predicting loneliness from social network characteristics. *Journal of Personality and Social Psychology*, *51*(5), 1069.

Swader, C. S. (2018). Loneliness in Europe: personal and societal individualism-collectivism and their connection to social isolation. *Social Forces*, *97*(3), 1307-1336.

Taube, E., Kristensson, J., Sandberg, M., Midlöv, P., & Jakobsson, U. (2015). Loneliness and health care consumption among older people. *Scandinavian journal of caring sciences*, *29*(3), 435-443.

Thomése, F., Tilburg, T. V., & Knipscheer, K. C. (2003). Continuation of exchange with neighbors in later life: The importance of the neighborhood context. *Personal Relationships*, *10*(4), 535-550.

Thurston, R. C., & Kubzansky, L. D. (2009). Women, loneliness, and incident coronary heart disease. *Psychosomatic medicine*, *71*(8), 836.

Tillich, P. (1952). *The courage to be*. New Haven, CT: Yale University Press.

Tzouvara, V., Papadopoulos, C., & Randhawa, G. (2015). A narrative review of the theoretical foundations of loneliness. *British journal of community nursing*, *20*(7), 329-334.

Uysal-Bozkir, Ö., Fokkema, T., MacNeil-Vroomen, J. L., van Tilburg, T. G., & de Rooij, S. E. (2017). Translation and validation of the De Jong Gierveld Loneliness Scale among older migrants living in the Netherlands. *The Journals of Gerontology: Series B*, *72*(1), 109-119.

Valtorta, N. K., Kanaan, M., Gilbody, S., Ronzi, S., & Hanratty, B. (2016). Loneliness and social isolation as risk factors for coronary heart disease and stroke: systematic review and meta-analysis of longitudinal observational studies. *Heart*, *102*(13), 1009-1016.

Van Beljouw, I. M., van Exel, E., de Jong Gierveld, J., Comijs, H. C., Heerings, M., Stek, M. L., & van Marwijk, H. W. (2014). “Being all alone makes me sad”: loneliness in older adults with depressive symptoms. *International psychogeriatrics*, *26*(9), 1541-1551.

Van Roekel, E., Scholte, R. H., Verhagen, M., Goossens, L., & Engels, R. C. (2010). Loneliness in adolescence: Gene × environment interactions involving the serotonin transporter gene. *Journal of Child Psychology and Psychiatry*, *51*, 747–754. doi:10.1111/j.1469-7610.2010.02225.x

Van Tilburg, T., de Jong Gierveld, J., Lecchini, L., & Marsiglia, D. (1998). Social integration and loneliness: A comparative study among older adults in the Netherlands and Tuscany, Italy. *Journal of social and personal relationships*, *15*(6), 740-754.

Van Tilburg, T., Havens, B., & de Jong Gierveld, J. (2004). Loneliness among older adults in the Netherlands, Italy, and Canada: A multifaceted comparison. *Canadian Journal on Aging/La Revue canadienne du vieillissement*, *23*(2), 169-180.

VanderWeele, T. J., Hawkley, L. C., & Cacioppo, J. T. (2012). On the reciprocal association between loneliness and subjective well-being. *American Journal of Epidemiology*, *176*(9), 777-784.

Victor, C. R., & Yang, K. (2012). The prevalence of loneliness among adults: a case study of the United Kingdom. *The Journal of psychology*, *146*(1-2), 85-104.

Victor, C., Mansfield, L., Kay, T., Daykin, N., Lane, J., Duffy, L. G., Tomlinson, A., & Meads, C. (2018). An overview of reviews: the effectiveness of interventions to address loneliness at all stages of the life-course. *What works wellbeing*. Retrieved from whatworkswellbeing.org

Victor, C., Scambler, S., Bond, J., & Bowling, A. (2000). Being alone in later life: loneliness, social isolation and living alone. *Reviews in Clinical Gerontology*, *10*(4), 407-417.

Weiss, R. S. (1973). *Loneliness: The experience of emotional and social isolation*. Cambridge, MA: MIT Press.

Weiss, R. S. (1982). Issues in the study of loneliness. *Loneliness: A sourcebook of current theory, research and therapy*, 71-80.

Wenger, G. C., Davies, R., Shahtahmasebi, S., & Scott, A. (1996). Social isolation and loneliness in old age: review and model refinement. *Ageing & Society*, *16*(3), 333-358.

Whisman, M. A., & Bruce, M. L. (1999). Marital dissatisfaction and incidence of major depressive episode in a community sample. *Journal of abnormal psychology*, *108*(4), 674.

Wilkinson, R. G. (1994). The epidemiological transition: from material scarcity to social disadvantage?. *Daedalus*, *123*(4), 61-77.

Wilson, R. S., Krueger, K. R., Arnold, S. E., Schneider, J. A., Kelly, J. F., Barnes, L. L., ... & Bennett, D. A. (2007). Loneliness and risk of Alzheimer disease. *Archives of general psychiatry*, *64*(2), 234-240.

Yang, K., & Victor, C. (2011). Age and loneliness in 25 European nations. *Ageing & Society*, *31*(8), 1368-1388.

Yarcheski, A., Mahon, N. E., & Yarcheski, T. J. (2011). Stress, hope, and loneliness in young adolescents. *Psychological Reports*, *108*(3), 919-922.

Zammit, P., & Fiorini, A. (2015). Depressive illness in institutionalised older people in Malta. *Malta Medical Journal*, *27*(03).

Zebhauser, A., Hofmann-Xu, L., Baumert, J., Häfner, S., Lacruz, M. E., Emeny, R. T., ... & Ladwig, K. H. (2014). How much does it hurt to be lonely? Mental and physical differences between older men and women in the KORA-Age Study. *International journal of geriatric psychiatry*, *29*(3), 245-252.

Zilboorg, G. (1938). Loneliness. *Atlantic Monthly*, *161*, 45-54.

Zimmermann, J. G. [1785/6). *Uber díe einsamkeit* [About loneliness]. Frankfurt: Thoppau.